



**Lavori urgenti di messa in sicurezza, ripristino e consolidamento a seguito di dissesti e movimenti franosi sulla S.P. 15 tra Pollica e Acciaroli - Interventi urgenti di Protezione Civile**

**PROGETTO DEFINITIVO**

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**R.7**

**Relazione sulle strutture**

Scala:

**1:200 / 1:100**

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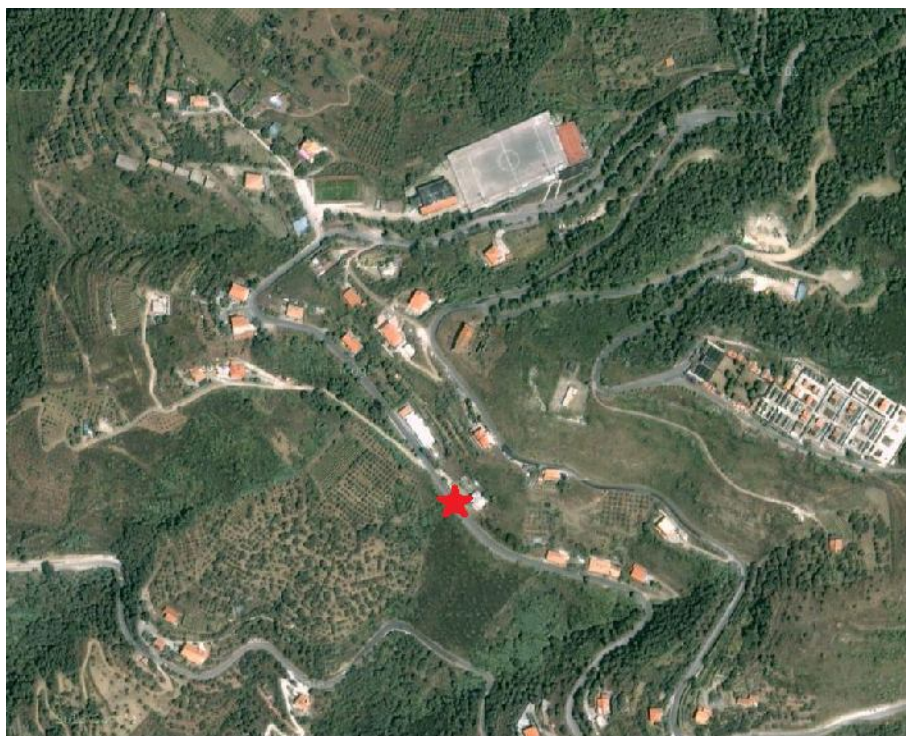
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**Revisione**

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## PROGETTO DEFINITIVO

### LAVORI URGENTI DI MESSA IN SICUREZZA, RIPRISTINO E CONSOLIDAMENTO A SEGUITO DI DISSESTI E MOVIMENTI FRANOSI SULLA S.P. 15 TRA POLLICA E ACCIAROLI INTERVENTI URGENTI DI PROTEZIONE CIVILE

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## Analisi della spinta

### Pressioni terreno

#### Simbologia adottata

Sono riportati i valori delle pressioni in corrispondenza delle sezioni di calcolo

$Y$  ordinata rispetto alla testa della paratia espressa in [m] e positiva verso il basso.

Le pressioni sono tutte espresse in [kg/mq]

$\sigma_{am}$  sigma attiva da monte

$\sigma_{av}$  sigma attiva da valle

$\sigma_{pm}$  sigma passiva da monte

$\sigma_{pv}$  sigma passiva da valle

$\delta_a$  inclinazione spinta attiva espressa in [°]

$\delta_p$  inclinazione spinta passiva espressa in [°]

### Combinazione n° 1

n°	Y(m)	$\sigma_{am}$	$\sigma_{av}$	$\sigma_{pm}$	$\sigma_{pv}$	$\delta_a$	$\delta_p$
1	0.00	0	0	0	0	20.0	0.0
2	0.10	70	0	702	0	20.0	0.0
3	0.20	139	0	1404	0	20.0	0.0
4	0.30	209	0	2106	0	20.0	0.0
5	0.40	278	0	2808	0	20.0	0.0
6	0.50	348	0	3510	0	20.0	0.0
7	0.60	417	0	4212	0	20.0	0.0
8	0.70	487	0	4914	0	20.0	0.0
9	0.80	557	0	5616	0	20.0	0.0
10	0.90	626	0	6318	0	20.0	0.0
11	1.00	696	0	7020	0	20.0	0.0
12	1.10	765	0	7722	0	20.0	0.0
13	1.20	835	0	8424	0	20.0	0.0
14	1.30	904	0	9126	0	20.0	0.0
15	1.40	974	0	9828	0	20.0	0.0
16	1.50	1044	0	10530	0	20.0	0.0
17	1.60	1113	0	11232	0	20.0	0.0
18	1.70	1183	0	11934	0	20.0	0.0
19	1.80	1252	0	12636	0	20.0	0.0
20	1.90	1322	0	13338	0	20.0	0.0
21	2.00	1391	0	14040	0	20.0	0.0
22	2.10	1461	0	14742	0	20.0	0.0
23	2.20	1531	0	15444	0	20.0	0.0
24	2.30	1600	0	16146	0	20.0	0.0
25	2.40	1670	0	16848	0	20.0	0.0
26	2.50	1739	0	17550	0	20.0	0.0
27	2.60	1809	0	18252	0	20.0	0.0
28	2.70	1878	0	18954	0	20.0	0.0
29	2.80	1948	0	19656	0	20.0	0.0
30	2.90	2018	0	20358	0	20.0	0.0
31	3.00	2087	0	21060	0	20.0	0.0
32	3.10	2157	0	21762	0	20.0	0.0
33	3.20	2226	0	22464	0	20.0	0.0
34	3.30	2296	0	23166	0	20.0	0.0
35	3.40	2365	0	23868	0	20.0	0.0
36	3.50	2435	0	24570	0	20.0	0.0
37	3.60	2505	0	25272	0	20.0	0.0

Relazione e fascicolo di calcolo strutturale

38	3.70	2574	0	25974	0	20.0	0.0
39	3.80	2644	0	26676	0	20.0	0.0
40	3.90	2710	0	27343	0	20.0	0.0
41	3.98	2759	0	27834	0	20.0	0.0
42	4.00	1388	0	27451	4691	20.0	0.0
43	4.02	0	0	27418	4762	13.0	0.0
44	4.10	0	0	28833	5042	13.0	0.0
45	4.20	0	0	30557	5260	13.0	0.0
46	4.30	0	0	32083	5487	13.0	0.0
47	4.40	0	0	33366	5712	13.0	0.0
48	4.50	2373	0	34491	5936	13.0	0.0
49	4.60	3511	0	35515	6159	13.0	0.0
50	4.70	2325	0	36472	6380	13.0	0.0
51	4.80	2404	0	37384	6600	13.0	0.0
52	4.90	1217	0	38266	6818	13.0	0.0
53	5.00	0	0	39124	7034	13.0	0.0
54	5.10	0	0	39966	7250	13.0	0.0
55	5.20	0	0	40795	7464	13.0	0.0
56	5.30	25	0	41614	7676	13.0	0.0
57	5.40	110	0	42426	7887	13.0	0.0
58	5.50	228	0	43232	8097	13.0	0.0
59	5.60	350	0	44033	8305	13.0	0.0
60	5.70	468	0	44831	8512	13.0	0.0
61	5.80	584	0	45625	8718	13.0	0.0
62	5.90	703	0	46417	8922	13.0	0.0
63	6.00	819	0	47206	9125	13.0	0.0
64	6.10	933	0	47994	9327	13.0	0.0
65	6.20	1047	0	48781	9527	13.0	0.0
66	6.30	1162	0	49566	9726	13.0	0.0
67	6.40	1277	0	50350	9924	13.0	0.0
68	6.50	1390	0	51134	10121	13.0	0.0
69	6.60	1502	0	51917	10316	13.0	0.0
70	6.70	1614	0	52699	10509	13.0	0.0
71	6.80	1728	0	53481	10702	13.0	0.0
72	6.90	1836	0	54223	10884	13.0	0.0
73	6.98	1916	0	54770	11017	13.0	0.0
74	7.00	1335	0	165855	14722	24.0	0.0
75	7.02	362	0	266169	18465	24.0	0.0
76	7.10	0	0	248689	18702	24.0	0.0
77	7.20	0	0	238897	19024	24.0	0.0
78	7.30	0	0	234622	19363	24.0	0.0
79	7.40	0	0	232441	19703	24.0	0.0
80	7.50	0	0	231150	20043	24.0	0.0
81	7.60	0	0	230308	20384	24.0	0.0
82	7.70	0	0	229717	20724	24.0	0.0
83	7.80	0	0	224213	21064	24.0	0.0
84	7.90	0	0	217589	21405	24.0	0.0
85	8.00	0	0	215687	21745	24.0	0.0
86	8.10	0	0	214632	22084	24.0	0.0
87	8.20	0	0	213578	22424	24.0	0.0
88	8.30	0	0	212505	22764	24.0	0.0
89	8.40	0	0	211395	23103	24.0	0.0
90	8.50	0	0	210231	23442	24.0	0.0
91	8.60	0	0	208996	23781	24.0	0.0
92	8.70	0	0	207673	24120	24.0	0.0
93	8.80	0	0	206237	24458	24.0	0.0
94	8.90	0	0	204920	24797	24.0	0.0

Relazione e fascicolo di calcolo strutturale

95	9.00	0	0	204267	25135	24.0	0.0
96	9.10	0	0	204081	25473	24.0	0.0
97	9.20	0	0	203852	25810	24.0	0.0
98	9.30	0	0	203564	26148	24.0	0.0
99	9.40	0	0	203203	26485	24.0	0.0
100	9.50	0	0	202754	26822	24.0	0.0
101	9.60	0	0	180358	27159	24.0	0.0
102	9.70	0	0	156924	27496	24.0	0.0
103	9.80	0	0	156425	27832	24.0	0.0
104	9.90	0	0	158003	28169	24.0	0.0
105	10.00	0	0	159582	28505	24.0	0.0
106	10.10	0	0	161161	28841	24.0	0.0
107	10.20	0	0	162740	29177	24.0	0.0
108	10.30	0	0	164319	29512	24.0	0.0
109	10.40	0	0	165899	29848	24.0	0.0
110	10.50	0	0	167479	30183	24.0	0.0
111	10.60	0	0	169058	30518	24.0	0.0
112	10.70	0	0	170638	30853	24.0	0.0
113	10.80	0	0	172218	31188	24.0	0.0
114	10.90	0	0	173799	31523	24.0	0.0
115	11.00	0	0	175379	31857	24.0	0.0
116	11.10	8	0	176959	32192	24.0	0.0
117	11.20	44	0	178540	32526	24.0	0.0
118	11.30	103	0	180121	32860	24.0	0.0
119	11.40	162	0	181701	33194	24.0	0.0
120	11.50	222	66	183282	33527	24.0	0.0
121	11.60	283	115	184863	33861	24.0	0.0
122	11.70	343	163	186444	34195	24.0	0.0
123	11.80	402	212	188026	34528	24.0	0.0
124	11.90	462	261	189607	34861	24.0	0.0
125	12.00	523	309	191188	35194	24.0	0.0

### Combinazione n° 2

n°	Y(m)	$\sigma_{am}$	$\sigma_{av}$	$\sigma_{pm}$	$\sigma_{pv}$	$\delta_a$	$\delta_p$
1	0.00	0	0	0	0	16.2	0.0
2	0.10	66	0	440	0	16.2	0.0
3	0.20	131	0	880	0	16.2	0.0
4	0.30	197	0	1320	0	16.2	0.0
5	0.40	262	0	1760	0	16.2	0.0
6	0.50	328	0	2200	0	16.2	0.0
7	0.60	393	0	2640	0	16.2	0.0
8	0.70	459	0	3080	0	16.2	0.0
9	0.80	524	0	3520	0	16.2	0.0
10	0.90	590	0	3960	0	16.2	0.0
11	1.00	655	0	4400	0	16.2	0.0
12	1.10	721	0	4840	0	16.2	0.0
13	1.20	786	0	5279	0	16.2	0.0
14	1.30	852	0	5719	0	16.2	0.0
15	1.40	918	0	6159	0	16.2	0.0
16	1.50	983	0	6599	0	16.2	0.0
17	1.60	1049	0	7039	0	16.2	0.0
18	1.70	1114	0	7479	0	16.2	0.0
19	1.80	1180	0	7919	0	16.2	0.0
20	1.90	1245	0	8359	0	16.2	0.0
21	2.00	1311	0	8799	0	16.2	0.0

Relazione e fascicolo di calcolo strutturale

22	2.10	1376	0	9239	0	16.2	0.0
23	2.20	1442	0	9679	0	16.2	0.0
24	2.30	1507	0	10119	0	16.2	0.0
25	2.40	1573	0	10559	0	16.2	0.0
26	2.50	1639	0	10999	0	16.2	0.0
27	2.60	1704	0	11439	0	16.2	0.0
28	2.70	1770	0	11879	0	16.2	0.0
29	2.80	1835	0	12319	0	16.2	0.0
30	2.90	1901	0	12759	0	16.2	0.0
31	3.00	1966	0	13199	0	16.2	0.0
32	3.10	2032	0	13639	0	16.2	0.0
33	3.20	2097	0	14079	0	16.2	0.0
34	3.30	2163	0	14519	0	16.2	0.0
35	3.40	2228	0	14959	0	16.2	0.0
36	3.50	2294	0	15398	0	16.2	0.0
37	3.60	2359	0	15838	0	16.2	0.0
38	3.70	2425	0	16278	0	16.2	0.0
39	3.80	2491	0	16718	0	16.2	0.0
40	3.90	2553	0	17136	0	16.2	0.0
41	3.98	2599	0	17444	0	16.2	0.0
42	4.00	1308	0	20308	3634	16.2	0.0
43	4.02	0	0	23199	3685	10.5	0.0
44	4.10	0	0	23569	3890	10.5	0.0
45	4.20	766	0	24048	4041	10.5	0.0
46	4.30	1965	0	24534	4198	10.5	0.0
47	4.40	2433	0	25013	4355	10.5	0.0
48	4.50	2503	0	25487	4511	10.5	0.0
49	4.60	2573	0	25960	4665	10.5	0.0
50	4.70	2643	0	26433	4818	10.5	0.0
51	4.80	1339	0	26905	4970	10.5	0.0
52	4.90	0	0	27378	5121	10.5	0.0
53	5.00	0	0	27850	5271	10.5	0.0
54	5.10	0	0	28322	5420	10.5	0.0
55	5.20	0	0	28795	5567	10.5	0.0
56	5.30	12	0	29268	5714	10.5	0.0
57	5.40	78	0	29741	5859	10.5	0.0
58	5.50	187	0	30213	6003	10.5	0.0
59	5.60	293	0	30686	6146	10.5	0.0
60	5.70	396	0	31159	6288	10.5	0.0
61	5.80	501	0	31632	6429	10.5	0.0
62	5.90	606	0	32105	6568	10.5	0.0
63	6.00	709	0	32578	6707	10.5	0.0
64	6.10	810	0	33051	6844	10.5	0.0
65	6.20	911	0	33523	6980	10.5	0.0
66	6.30	1013	0	33996	7115	10.5	0.0
67	6.40	1113	0	34469	7249	10.5	0.0
68	6.50	1213	0	34941	7382	10.5	0.0
69	6.60	1316	0	35414	7514	10.5	0.0
70	6.70	1416	0	35886	7644	10.5	0.0
71	6.80	1515	0	36359	7773	10.5	0.0
72	6.90	1609	0	36808	7895	10.5	0.0
73	6.98	1680	0	37138	7984	10.5	0.0
74	7.00	944	0	82887	10420	19.6	0.0
75	7.02	90	0	126603	12879	19.6	0.0
76	7.10	0	0	122983	13031	19.6	0.0
77	7.20	0	0	120445	13237	19.6	0.0
78	7.30	0	0	119230	13454	19.6	0.0

Relazione e fascicolo di calcolo strutturale

79	7.40	0	0	118678	13670	19.6	0.0
80	7.50	0	0	118454	13887	19.6	0.0
81	7.60	0	0	118416	14104	19.6	0.0
82	7.70	0	0	118491	14320	19.6	0.0
83	7.80	0	0	118639	14536	19.6	0.0
84	7.90	0	0	118835	14752	19.6	0.0
85	8.00	0	0	119064	14967	19.6	0.0
86	8.10	0	0	118781	15182	19.6	0.0
87	8.20	0	0	115630	15398	19.6	0.0
88	8.30	0	0	112923	15612	19.6	0.0
89	8.40	0	0	113010	15827	19.6	0.0
90	8.50	0	0	113106	16041	19.6	0.0
91	8.60	0	0	113206	16255	19.6	0.0
92	8.70	0	0	113307	16469	19.6	0.0
93	8.80	0	0	113406	16682	19.6	0.0
94	8.90	0	0	113500	16895	19.6	0.0
95	9.00	0	0	113587	17108	19.6	0.0
96	9.10	0	0	113664	17320	19.6	0.0
97	9.20	0	0	113730	17533	19.6	0.0
98	9.30	0	0	113781	17745	19.6	0.0
99	9.40	0	0	113810	17957	19.6	0.0
100	9.50	0	0	113925	18168	19.6	0.0
101	9.60	0	0	114240	18379	19.6	0.0
102	9.70	0	0	114650	18590	19.6	0.0
103	9.80	0	0	115057	18801	19.6	0.0
104	9.90	0	0	115457	19012	19.6	0.0
105	10.00	0	0	115850	19222	19.6	0.0
106	10.10	0	0	116236	19432	19.6	0.0
107	10.20	0	0	116612	19642	19.6	0.0
108	10.30	0	0	116978	19851	19.6	0.0
109	10.40	0	0	117332	20061	19.6	0.0
110	10.50	0	0	117673	20270	19.6	0.0
111	10.60	20	0	118000	20479	19.6	0.0
112	10.70	68	0	115763	20687	19.6	0.0
113	10.80	126	0	107242	20896	19.6	0.0
114	10.90	184	43	101564	21104	19.6	0.0
115	11.00	241	88	102457	21312	19.6	0.0
116	11.10	299	134	103349	21520	19.6	0.0
117	11.20	356	179	104242	21727	19.6	0.0
118	11.30	415	225	105135	21934	19.6	0.0
119	11.40	473	272	106028	22142	19.6	0.0
120	11.50	530	316	106921	22348	19.6	0.0
121	11.60	588	362	107815	22555	19.6	0.0
122	11.70	647	409	108708	22762	19.6	0.0
123	11.80	705	453	109601	22968	19.6	0.0
124	11.90	763	499	110494	23174	19.6	0.0
125	12.00	822	546	111388	23380	19.6	0.0

### Combinazione n° 3

n°	Y(m)	$\sigma_{am}$	$\sigma_{av}$	$\sigma_{pm}$	$\sigma_{pv}$	$\delta_a$	$\delta_p$
1	0.00	442	0	4455	0	20.0	0.0
2	0.10	513	0	5179	0	20.0	0.0
3	0.20	585	0	5904	0	20.0	0.0
4	0.30	655	0	6606	0	20.0	0.0
5	0.40	724	0	7308	0	20.0	0.0

6	0.50	794	0	8010	0	20.0	0.0
7	0.60	863	0	8712	0	20.0	0.0
8	0.70	933	0	9414	0	20.0	0.0
9	0.80	1003	0	10116	0	20.0	0.0
10	0.90	1072	0	10818	0	20.0	0.0
11	1.00	1142	0	11520	0	20.0	0.0
12	1.10	1211	0	12222	0	20.0	0.0
13	1.20	1281	0	12924	0	20.0	0.0
14	1.30	1350	0	13626	0	20.0	0.0
15	1.40	1420	0	14328	0	20.0	0.0
16	1.50	1490	0	15030	0	20.0	0.0
17	1.60	1559	0	15732	0	20.0	0.0
18	1.70	1629	0	16434	0	20.0	0.0
19	1.80	1698	0	17136	0	20.0	0.0
20	1.90	1768	0	17838	0	20.0	0.0
21	2.00	1837	0	18540	0	20.0	0.0
22	2.10	1907	0	19242	0	20.0	0.0
23	2.20	1977	0	19944	0	20.0	0.0
24	2.30	2046	0	20646	0	20.0	0.0
25	2.40	2116	0	21348	0	20.0	0.0
26	2.50	2185	0	22050	0	20.0	0.0
27	2.60	2255	0	22752	0	20.0	0.0
28	2.70	2324	0	23454	0	20.0	0.0
29	2.80	2394	0	24156	0	20.0	0.0
30	2.90	2464	0	24858	0	20.0	0.0
31	3.00	2533	0	25560	0	20.0	0.0
32	3.10	2603	0	26262	0	20.0	0.0
33	3.20	2672	0	26964	0	20.0	0.0
34	3.30	2742	0	27666	0	20.0	0.0
35	3.40	2811	0	28368	0	20.0	0.0
36	3.50	2881	0	29070	0	20.0	0.0
37	3.60	2951	0	29772	0	20.0	0.0
38	3.70	3020	0	30474	0	20.0	0.0
39	3.80	3090	0	31176	0	20.0	0.0
40	3.90	3156	0	31843	0	20.0	0.0
41	3.98	3204	0	32334	0	20.0	0.0
42	4.00	1611	0	29201	4691	20.0	0.0
43	4.02	0	0	26388	4762	13.0	0.0
44	4.10	0	0	27876	5042	13.0	0.0
45	4.20	0	0	29968	5260	13.0	0.0
46	4.30	0	0	32018	5487	13.0	0.0
47	4.40	0	0	33761	5712	13.0	0.0
48	4.50	0	0	35232	5936	13.0	0.0
49	4.60	0	0	36512	6159	13.0	0.0
50	4.70	0	0	37660	6380	13.0	0.0
51	4.80	3142	0	38719	6600	13.0	0.0
52	4.90	3142	0	39714	6818	13.0	0.0
53	5.00	185	0	40663	7034	13.0	0.0
54	5.10	436	0	41578	7250	13.0	0.0
55	5.20	564	0	42466	7464	13.0	0.0
56	5.30	692	0	43334	7676	13.0	0.0
57	5.40	819	0	44186	7887	13.0	0.0
58	5.50	939	0	45025	8097	13.0	0.0
59	5.60	1061	0	45854	8305	13.0	0.0
60	5.70	1184	0	46675	8512	13.0	0.0
61	5.80	1301	0	47489	8718	13.0	0.0
62	5.90	1421	0	48297	8922	13.0	0.0



63	6.00	1539	0	49101	9125	13.0	0.0
64	6.10	1655	0	49901	9327	13.0	0.0
65	6.20	1772	0	50697	9527	13.0	0.0
66	6.30	1887	0	51491	9726	13.0	0.0
67	6.40	2003	0	52282	9924	13.0	0.0
68	6.50	2117	0	53071	10121	13.0	0.0
69	6.60	2231	0	53858	10316	13.0	0.0
70	6.70	2347	0	54644	10509	13.0	0.0
71	6.80	2463	0	55429	10702	13.0	0.0
72	6.90	2569	0	56173	10884	13.0	0.0
73	6.98	2650	0	56721	11017	13.0	0.0
74	7.00	2099	0	184918	14722	24.0	0.0
75	7.02	756	0	295762	18465	24.0	0.0
76	7.10	0	0	268535	18702	24.0	0.0
77	7.20	0	0	254398	19024	24.0	0.0
78	7.30	0	0	248369	19363	24.0	0.0
79	7.40	0	0	245282	19703	24.0	0.0
80	7.50	0	0	243439	20043	24.0	0.0
81	7.60	0	0	242228	20384	24.0	0.0
82	7.70	0	0	240751	20724	24.0	0.0
83	7.80	0	0	235517	21064	24.0	0.0
84	7.90	0	0	234494	21405	24.0	0.0
85	8.00	0	0	241605	21745	24.0	0.0
86	8.10	0	0	249940	22084	24.0	0.0
87	8.20	0	0	258908	22424	24.0	0.0
88	8.30	0	0	263988	22764	24.0	0.0
89	8.40	0	0	264258	23103	24.0	0.0
90	8.50	0	0	263653	23442	24.0	0.0
91	8.60	0	0	263012	23781	24.0	0.0
92	8.70	0	0	262331	24120	24.0	0.0
93	8.80	0	0	261608	24458	24.0	0.0
94	8.90	0	0	260839	24797	24.0	0.0
95	9.00	0	0	260018	25135	24.0	0.0
96	9.10	0	0	259142	25473	24.0	0.0
97	9.20	0	0	258454	25810	24.0	0.0
98	9.30	0	0	262872	26148	24.0	0.0
99	9.40	0	0	274343	26485	24.0	0.0
100	9.50	0	0	287422	26822	24.0	0.0
101	9.60	0	0	294626	27159	24.0	0.0
102	9.70	0	0	295630	27496	24.0	0.0
103	9.80	0	0	271336	27832	24.0	0.0
104	9.90	0	0	204299	28169	24.0	0.0
105	10.00	0	0	162379	28505	24.0	0.0
106	10.10	0	0	163902	28841	24.0	0.0
107	10.20	0	0	165427	29177	24.0	0.0
108	10.30	0	0	166954	29512	24.0	0.0
109	10.40	0	0	168482	29848	24.0	0.0
110	10.50	0	0	170011	30183	24.0	0.0
111	10.60	11	0	171542	30518	24.0	0.0
112	10.70	51	0	173074	30853	24.0	0.0
113	10.80	112	0	174607	31188	24.0	0.0
114	10.90	170	0	176142	31523	24.0	0.0
115	11.00	230	0	177678	31857	24.0	0.0
116	11.10	291	0	179215	32192	24.0	0.0
117	11.20	351	0	180754	32526	24.0	0.0
118	11.30	414	0	182293	32860	24.0	0.0
119	11.40	472	0	183834	33194	24.0	0.0

120	11.50	533	66	185376	33527	24.0	0.0
121	11.60	593	115	186918	33861	24.0	0.0
122	11.70	652	163	188462	34195	24.0	0.0
123	11.80	715	212	190007	34528	24.0	0.0
124	11.90	776	261	191552	34861	24.0	0.0
125	12.00	837	309	193099	35194	24.0	0.0

#### Combinazione n° 4

n°	Y(m)	$\sigma_{am}$	$\sigma_{av}$	$\sigma_{pm}$	$\sigma_{pv}$	$\delta_a$	$\delta_p$
1	0.00	469	0	3146	0	16.2	0.0
2	0.10	537	0	3602	0	16.2	0.0
3	0.20	604	0	4057	0	16.2	0.0
4	0.30	670	0	4497	0	16.2	0.0
5	0.40	736	0	4937	0	16.2	0.0
6	0.50	801	0	5377	0	16.2	0.0
7	0.60	867	0	5817	0	16.2	0.0
8	0.70	932	0	6257	0	16.2	0.0
9	0.80	998	0	6697	0	16.2	0.0
10	0.90	1063	0	7137	0	16.2	0.0
11	1.00	1129	0	7577	0	16.2	0.0
12	1.10	1194	0	8017	0	16.2	0.0
13	1.20	1260	0	8457	0	16.2	0.0
14	1.30	1325	0	8897	0	16.2	0.0
15	1.40	1391	0	9337	0	16.2	0.0
16	1.50	1456	0	9777	0	16.2	0.0
17	1.60	1522	0	10217	0	16.2	0.0
18	1.70	1588	0	10657	0	16.2	0.0
19	1.80	1653	0	11097	0	16.2	0.0
20	1.90	1719	0	11537	0	16.2	0.0
21	2.00	1784	0	11977	0	16.2	0.0
22	2.10	1850	0	12417	0	16.2	0.0
23	2.20	1915	0	12857	0	16.2	0.0
24	2.30	1981	0	13296	0	16.2	0.0
25	2.40	2046	0	13736	0	16.2	0.0
26	2.50	2112	0	14176	0	16.2	0.0
27	2.60	2177	0	14616	0	16.2	0.0
28	2.70	2243	0	15056	0	16.2	0.0
29	2.80	2309	0	15496	0	16.2	0.0
30	2.90	2374	0	15936	0	16.2	0.0
31	3.00	2440	0	16376	0	16.2	0.0
32	3.10	2505	0	16816	0	16.2	0.0
33	3.20	2571	0	17256	0	16.2	0.0
34	3.30	2636	0	17696	0	16.2	0.0
35	3.40	2702	0	18136	0	16.2	0.0
36	3.50	2767	0	18576	0	16.2	0.0
37	3.60	2833	0	19016	0	16.2	0.0
38	3.70	2898	0	19456	0	16.2	0.0
39	3.80	2964	0	19896	0	16.2	0.0
40	3.90	3026	0	20314	0	16.2	0.0
41	3.98	3072	0	20622	0	16.2	0.0
42	4.00	1544	0	22067	3634	16.2	0.0
43	4.02	0	0	23612	3685	10.5	0.0
44	4.10	0	0	24167	3890	10.5	0.0
45	4.20	0	0	24860	4041	10.5	0.0
46	4.30	0	0	25522	4198	10.5	0.0

Relazione e fascicolo di calcolo strutturale

47	4.40	2479	0	26133	4355	10.5	0.0
48	4.50	3943	0	26709	4511	10.5	0.0
49	4.60	2963	0	27259	4665	10.5	0.0
50	4.70	3032	0	27793	4818	10.5	0.0
51	4.80	1533	0	28313	4970	10.5	0.0
52	4.90	126	0	28825	5121	10.5	0.0
53	5.00	311	0	29329	5271	10.5	0.0
54	5.10	430	0	29828	5420	10.5	0.0
55	5.20	547	0	30323	5567	10.5	0.0
56	5.30	661	0	30814	5714	10.5	0.0
57	5.40	772	0	31302	5859	10.5	0.0
58	5.50	881	0	31789	6003	10.5	0.0
59	5.60	992	0	32273	6146	10.5	0.0
60	5.70	1099	0	32756	6288	10.5	0.0
61	5.80	1206	0	33237	6429	10.5	0.0
62	5.90	1312	0	33718	6568	10.5	0.0
63	6.00	1415	0	34197	6707	10.5	0.0
64	6.10	1520	0	34675	6844	10.5	0.0
65	6.20	1624	0	35153	6980	10.5	0.0
66	6.30	1726	0	35630	7115	10.5	0.0
67	6.40	1828	0	36107	7249	10.5	0.0
68	6.50	1931	0	36583	7382	10.5	0.0
69	6.60	2034	0	37058	7514	10.5	0.0
70	6.70	2135	0	37533	7644	10.5	0.0
71	6.80	2236	0	38008	7773	10.5	0.0
72	6.90	2330	0	38459	7895	10.5	0.0
73	6.98	2404	0	38790	7984	10.5	0.0
74	7.00	1643	0	90335	10420	19.6	0.0
75	7.02	426	0	138597	12879	19.6	0.0
76	7.10	0	0	132759	13031	19.6	0.0
77	7.20	0	0	128781	13237	19.6	0.0
78	7.30	0	0	126839	13454	19.6	0.0
79	7.40	0	0	125871	13670	19.6	0.0
80	7.50	0	0	125377	13887	19.6	0.0
81	7.60	0	0	125151	14104	19.6	0.0
82	7.70	0	0	125087	14320	19.6	0.0
83	7.80	0	0	125129	14536	19.6	0.0
84	7.90	0	0	125242	14752	19.6	0.0
85	8.00	0	0	125404	14967	19.6	0.0
86	8.10	0	0	123846	15182	19.6	0.0
87	8.20	0	0	121951	15398	19.6	0.0
88	8.30	0	0	123098	15612	19.6	0.0
89	8.40	0	0	126019	15827	19.6	0.0
90	8.50	0	0	129239	16041	19.6	0.0
91	8.60	0	0	132749	16255	19.6	0.0
92	8.70	0	0	136531	16469	19.6	0.0
93	8.80	0	0	140604	16682	19.6	0.0
94	8.90	0	0	144063	16895	19.6	0.0
95	9.00	0	0	145536	17108	19.6	0.0
96	9.10	0	0	145778	17320	19.6	0.0
97	9.20	0	0	146008	17533	19.6	0.0
98	9.30	0	0	146233	17745	19.6	0.0
99	9.40	0	0	146454	17957	19.6	0.0
100	9.50	0	0	146668	18168	19.6	0.0
101	9.60	0	0	146876	18379	19.6	0.0
102	9.70	0	0	147077	18590	19.6	0.0
103	9.80	0	0	147271	18801	19.6	0.0

104	9.90	0	0	147456	19012	19.6	0.0
105	10.00	11	0	147694	19222	19.6	0.0
106	10.10	51	0	149760	19432	19.6	0.0
107	10.20	109	0	154442	19642	19.6	0.0
108	10.30	167	0	160119	19851	19.6	0.0
109	10.40	226	0	164687	20061	19.6	0.0
110	10.50	284	0	166567	20270	19.6	0.0
111	10.60	341	0	167018	20479	19.6	0.0
112	10.70	399	0	167471	20687	19.6	0.0
113	10.80	460	0	167926	20896	19.6	0.0
114	10.90	517	43	168382	21104	19.6	0.0
115	11.00	575	88	140410	21312	19.6	0.0
116	11.10	636	134	108995	21520	19.6	0.0
117	11.20	692	179	106210	21727	19.6	0.0
118	11.30	751	225	107070	21934	19.6	0.0
119	11.40	810	272	107931	22142	19.6	0.0
120	11.50	867	316	108793	22348	19.6	0.0
121	11.60	928	362	109655	22555	19.6	0.0
122	11.70	986	409	110518	22762	19.6	0.0
123	11.80	1045	453	111382	22968	19.6	0.0
124	11.90	1104	499	112247	23174	19.6	0.0
125	12.00	1162	546	113112	23380	19.6	0.0

#### Combinazione n° 5

n°	Y(m)	$\sigma_{am}$	$\sigma_{av}$	$\sigma_{pm}$	$\sigma_{pv}$	$\delta_a$	$\delta_p$
1	0.00	0	0	0	0	20.0	0.0
2	0.10	59	0	540	0	20.0	0.0
3	0.20	119	0	1080	0	20.0	0.0
4	0.30	178	0	1620	0	20.0	0.0
5	0.40	237	0	2160	0	20.0	0.0
6	0.50	297	0	2700	0	20.0	0.0
7	0.60	356	0	3240	0	20.0	0.0
8	0.70	415	0	3780	0	20.0	0.0
9	0.80	475	0	4320	0	20.0	0.0
10	0.90	534	0	4860	0	20.0	0.0
11	1.00	593	0	5400	0	20.0	0.0
12	1.10	653	0	5940	0	20.0	0.0
13	1.20	712	0	6480	0	20.0	0.0
14	1.30	771	0	7020	0	20.0	0.0
15	1.40	831	0	7560	0	20.0	0.0
16	1.50	890	0	8100	0	20.0	0.0
17	1.60	950	0	8640	0	20.0	0.0
18	1.70	1009	0	9180	0	20.0	0.0
19	1.80	1068	0	9720	0	20.0	0.0
20	1.90	1128	0	10260	0	20.0	0.0
21	2.00	1187	0	10800	0	20.0	0.0
22	2.10	1246	0	11340	0	20.0	0.0
23	2.20	1306	0	11880	0	20.0	0.0
24	2.30	1365	0	12420	0	20.0	0.0
25	2.40	1424	0	12960	0	20.0	0.0
26	2.50	1484	0	13500	0	20.0	0.0
27	2.60	1543	0	14040	0	20.0	0.0
28	2.70	1602	0	14580	0	20.0	0.0
29	2.80	1662	0	15120	0	20.0	0.0
30	2.90	1721	0	15660	0	20.0	0.0

Relazione e fascicolo di calcolo strutturale

31	3.00	1780	0	16200	0	20.0	0.0
32	3.10	1840	0	16740	0	20.0	0.0
33	3.20	1899	0	17280	0	20.0	0.0
34	3.30	1958	0	17820	0	20.0	0.0
35	3.40	2018	0	18360	0	20.0	0.0
36	3.50	2077	0	18900	0	20.0	0.0
37	3.60	2136	0	19440	0	20.0	0.0
38	3.70	2196	0	19980	0	20.0	0.0
39	3.80	2255	0	20520	0	20.0	0.0
40	3.90	2312	0	21033	0	20.0	0.0
41	3.98	2354	0	21411	0	20.0	0.0
42	4.00	1301	0	24867	4682	20.0	0.0
43	4.02	0	0	28436	4743	13.0	0.0
44	4.10	0	0	29059	4987	13.0	0.0
45	4.20	0	0	29795	5154	13.0	0.0
46	4.30	1480	0	30486	5330	13.0	0.0
47	4.40	2313	0	31134	5504	13.0	0.0
48	4.50	1699	0	31762	5678	13.0	0.0
49	4.60	1756	0	32378	5850	13.0	0.0
50	4.70	1802	0	32988	6022	13.0	0.0
51	4.80	1849	0	33594	6193	13.0	0.0
52	4.90	936	0	34198	6363	13.0	0.0
53	5.00	0	0	34801	6532	13.0	0.0
54	5.10	0	0	35403	6701	13.0	0.0
55	5.20	0	0	36005	6868	13.0	0.0
56	5.30	0	0	36606	7035	13.0	0.0
57	5.40	0	0	37207	7200	13.0	0.0
58	5.50	0	0	37808	7365	13.0	0.0
59	5.60	0	0	38410	7529	13.0	0.0
60	5.70	0	0	39011	7693	13.0	0.0
61	5.80	0	0	39612	7855	13.0	0.0
62	5.90	0	0	40213	8017	13.0	0.0
63	6.00	0	0	40815	8177	13.0	0.0
64	6.10	0	0	41416	8337	13.0	0.0
65	6.20	0	0	42017	8497	13.0	0.0
66	6.30	0	0	42619	8655	13.0	0.0
67	6.40	0	0	43221	8813	13.0	0.0
68	6.50	0	0	43822	8970	13.0	0.0
69	6.60	0	0	44424	9126	13.0	0.0
70	6.70	0	0	45026	9281	13.0	0.0
71	6.80	7	0	45628	9435	13.0	0.0
72	6.90	53	0	46200	9581	13.0	0.0
73	6.98	106	0	46622	9688	13.0	0.0
74	7.00	187	0	135569	12875	24.0	0.0
75	7.02	126	0	217747	16091	24.0	0.0
76	7.10	0	0	206467	16276	24.0	0.0
77	7.20	0	0	199784	16528	24.0	0.0
78	7.30	0	0	196773	16794	24.0	0.0
79	7.40	0	0	195222	17059	24.0	0.0
80	7.50	0	0	194304	17324	24.0	0.0
81	7.60	0	0	193708	17590	24.0	0.0
82	7.70	0	0	193292	17855	24.0	0.0
83	7.80	0	0	188877	18120	24.0	0.0
84	7.90	0	0	182580	18385	24.0	0.0
85	8.00	0	0	180115	18649	24.0	0.0
86	8.10	0	0	179308	18914	24.0	0.0
87	8.20	0	0	178513	19178	24.0	0.0

88	8.30	0	0	177713	19442	24.0	0.0
89	8.40	0	0	176896	19706	24.0	0.0
90	8.50	0	0	176051	19970	24.0	0.0
91	8.60	0	0	175166	20233	24.0	0.0
92	8.70	0	0	174231	20496	24.0	0.0
93	8.80	0	0	173236	20760	24.0	0.0
94	8.90	0	0	172233	21023	24.0	0.0
95	9.00	0	0	171659	21285	24.0	0.0
96	9.10	0	0	171534	21548	24.0	0.0
97	9.20	0	0	171438	21810	24.0	0.0
98	9.30	0	0	171312	22073	24.0	0.0
99	9.40	0	0	171150	22335	24.0	0.0
100	9.50	0	0	170945	22597	24.0	0.0
101	9.60	0	0	166086	22859	24.0	0.0
102	9.70	0	0	144278	23120	24.0	0.0
103	9.80	0	0	127820	23382	24.0	0.0
104	9.90	0	0	129035	23643	24.0	0.0
105	10.00	0	0	130250	23904	24.0	0.0
106	10.10	0	0	131466	24165	24.0	0.0
107	10.20	0	0	132681	24426	24.0	0.0
108	10.30	0	0	133897	24687	24.0	0.0
109	10.40	0	0	135112	24947	24.0	0.0
110	10.50	0	0	136328	25208	24.0	0.0
111	10.60	0	0	137544	25468	24.0	0.0
112	10.70	0	0	138760	25728	24.0	0.0
113	10.80	0	0	139976	25988	24.0	0.0
114	10.90	0	0	141192	26248	24.0	0.0
115	11.00	0	0	142408	26508	24.0	0.0
116	11.10	0	0	143625	26767	24.0	0.0
117	11.20	0	0	144841	27027	24.0	0.0
118	11.30	0	0	146057	27286	24.0	0.0
119	11.40	0	0	147274	27546	24.0	0.0
120	11.50	0	0	148490	27805	24.0	0.0
121	11.60	0	0	149707	28064	24.0	0.0
122	11.70	0	0	150924	28323	24.0	0.0
123	11.80	0	0	152140	28581	24.0	0.0
124	11.90	0	0	153357	28840	24.0	0.0
125	12.00	0	0	154574	29099	24.0	0.0

### Combinazione n° 6

n°	Y(m)	$\sigma_{am}$	$\sigma_{av}$	$\sigma_{pm}$	$\sigma_{pv}$	$\delta_a$	$\delta_p$
1	0.00	0	0	0	0	16.2	0.0
2	0.10	72	0	440	0	16.2	0.0
3	0.20	144	0	880	0	16.2	0.0
4	0.30	216	0	1320	0	16.2	0.0
5	0.40	288	0	1760	0	16.2	0.0
6	0.50	360	0	2200	0	16.2	0.0
7	0.60	432	0	2640	0	16.2	0.0
8	0.70	504	0	3080	0	16.2	0.0
9	0.80	576	0	3520	0	16.2	0.0
10	0.90	649	0	3960	0	16.2	0.0
11	1.00	721	0	4400	0	16.2	0.0
12	1.10	793	0	4840	0	16.2	0.0
13	1.20	865	0	5279	0	16.2	0.0
14	1.30	937	0	5719	0	16.2	0.0

15	1.40	1009	0	6159	0	16.2	0.0
16	1.50	1081	0	6599	0	16.2	0.0
17	1.60	1153	0	7039	0	16.2	0.0
18	1.70	1225	0	7479	0	16.2	0.0
19	1.80	1297	0	7919	0	16.2	0.0
20	1.90	1369	0	8359	0	16.2	0.0
21	2.00	1441	0	8799	0	16.2	0.0
22	2.10	1513	0	9239	0	16.2	0.0
23	2.20	1585	0	9679	0	16.2	0.0
24	2.30	1657	0	10119	0	16.2	0.0
25	2.40	1729	0	10559	0	16.2	0.0
26	2.50	1802	0	10999	0	16.2	0.0
27	2.60	1874	0	11439	0	16.2	0.0
28	2.70	1946	0	11879	0	16.2	0.0
29	2.80	2018	0	12319	0	16.2	0.0
30	2.90	2090	0	12759	0	16.2	0.0
31	3.00	2162	0	13199	0	16.2	0.0
32	3.10	2234	0	13639	0	16.2	0.0
33	3.20	2306	0	14079	0	16.2	0.0
34	3.30	2378	0	14519	0	16.2	0.0
35	3.40	2450	0	14959	0	16.2	0.0
36	3.50	2522	0	15398	0	16.2	0.0
37	3.60	2594	0	15838	0	16.2	0.0
38	3.70	2666	0	16278	0	16.2	0.0
39	3.80	2738	0	16718	0	16.2	0.0
40	3.90	2807	0	17136	0	16.2	0.0
41	3.98	2858	0	17444	0	16.2	0.0
42	4.00	1568	0	20308	3634	16.2	0.0
43	4.02	0	0	23199	3685	10.5	0.0
44	4.10	0	0	23569	3890	10.5	0.0
45	4.20	766	0	24048	4041	10.5	0.0
46	4.30	1965	0	24534	4198	10.5	0.0
47	4.40	2433	0	25013	4355	10.5	0.0
48	4.50	2503	0	25487	4511	10.5	0.0
49	4.60	2573	0	25960	4665	10.5	0.0
50	4.70	2643	0	26433	4818	10.5	0.0
51	4.80	1339	0	26905	4970	10.5	0.0
52	4.90	0	0	27378	5121	10.5	0.0
53	5.00	0	0	27850	5271	10.5	0.0
54	5.10	0	0	28322	5420	10.5	0.0
55	5.20	0	0	28795	5567	10.5	0.0
56	5.30	12	0	29268	5714	10.5	0.0
57	5.40	78	0	29741	5859	10.5	0.0
58	5.50	187	0	30213	6003	10.5	0.0
59	5.60	293	0	30686	6146	10.5	0.0
60	5.70	396	0	31159	6288	10.5	0.0
61	5.80	501	0	31632	6429	10.5	0.0
62	5.90	606	0	32105	6568	10.5	0.0
63	6.00	709	0	32578	6707	10.5	0.0
64	6.10	810	0	33051	6844	10.5	0.0
65	6.20	911	0	33523	6980	10.5	0.0
66	6.30	1013	0	33996	7115	10.5	0.0
67	6.40	1113	0	34469	7249	10.5	0.0
68	6.50	1213	0	34941	7382	10.5	0.0
69	6.60	1316	0	35414	7514	10.5	0.0
70	6.70	1416	0	35886	7644	10.5	0.0
71	6.80	1515	0	36359	7773	10.5	0.0

72	6.90	1609	0	36808	7895	10.5	0.0
73	6.98	1680	0	37138	7984	10.5	0.0
74	7.00	944	0	82887	10420	19.6	0.0
75	7.02	90	0	126603	12879	19.6	0.0
76	7.10	0	0	122983	13031	19.6	0.0
77	7.20	0	0	120445	13237	19.6	0.0
78	7.30	0	0	119230	13454	19.6	0.0
79	7.40	0	0	118678	13670	19.6	0.0
80	7.50	0	0	118454	13887	19.6	0.0
81	7.60	0	0	118416	14104	19.6	0.0
82	7.70	0	0	118491	14320	19.6	0.0
83	7.80	0	0	118639	14536	19.6	0.0
84	7.90	0	0	118835	14752	19.6	0.0
85	8.00	0	0	119064	14967	19.6	0.0
86	8.10	0	0	118781	15182	19.6	0.0
87	8.20	0	0	115630	15398	19.6	0.0
88	8.30	0	0	112923	15612	19.6	0.0
89	8.40	0	0	113010	15827	19.6	0.0
90	8.50	0	0	113106	16041	19.6	0.0
91	8.60	0	0	113206	16255	19.6	0.0
92	8.70	0	0	113307	16469	19.6	0.0
93	8.80	0	0	113406	16682	19.6	0.0
94	8.90	0	0	113500	16895	19.6	0.0
95	9.00	0	0	113587	17108	19.6	0.0
96	9.10	0	0	113664	17320	19.6	0.0
97	9.20	0	0	113730	17533	19.6	0.0
98	9.30	0	0	113781	17745	19.6	0.0
99	9.40	0	0	113810	17957	19.6	0.0
100	9.50	0	0	113925	18168	19.6	0.0
101	9.60	0	0	114240	18379	19.6	0.0
102	9.70	0	0	114650	18590	19.6	0.0
103	9.80	0	0	115057	18801	19.6	0.0
104	9.90	0	0	115457	19012	19.6	0.0
105	10.00	0	0	115850	19222	19.6	0.0
106	10.10	0	0	116236	19432	19.6	0.0
107	10.20	0	0	116612	19642	19.6	0.0
108	10.30	0	0	116978	19851	19.6	0.0
109	10.40	0	0	117332	20061	19.6	0.0
110	10.50	0	0	117673	20270	19.6	0.0
111	10.60	20	0	118000	20479	19.6	0.0
112	10.70	68	0	115763	20687	19.6	0.0
113	10.80	126	0	107242	20896	19.6	0.0
114	10.90	184	43	101564	21104	19.6	0.0
115	11.00	241	88	102457	21312	19.6	0.0
116	11.10	299	134	103349	21520	19.6	0.0
117	11.20	356	179	104242	21727	19.6	0.0
118	11.30	415	225	105135	21934	19.6	0.0
119	11.40	473	272	106028	22142	19.6	0.0
120	11.50	530	316	106921	22348	19.6	0.0
121	11.60	588	362	107815	22555	19.6	0.0
122	11.70	647	409	108708	22762	19.6	0.0
123	11.80	705	453	109601	22968	19.6	0.0
124	11.90	763	499	110494	23174	19.6	0.0
125	12.00	822	546	111388	23380	19.6	0.0

**Combinazione n° 7**



$n^{\circ}$	Y(m)	$\sigma_{am}$	$\sigma_{av}$	$\sigma_{pm}$	$\sigma_{pv}$	$\delta_a$	$\delta_p$
1	0.00	59	0	594	0	20.0	0.0
2	0.10	119	0	1137	0	20.0	0.0
3	0.20	179	0	1680	0	20.0	0.0
4	0.30	238	0	2220	0	20.0	0.0
5	0.40	298	0	2760	0	20.0	0.0
6	0.50	358	0	3300	0	20.0	0.0
7	0.60	417	0	3840	0	20.0	0.0
8	0.70	477	0	4380	0	20.0	0.0
9	0.80	537	0	4920	0	20.0	0.0
10	0.90	596	0	5460	0	20.0	0.0
11	1.00	656	0	6000	0	20.0	0.0
12	1.10	716	0	6540	0	20.0	0.0
13	1.20	775	0	7080	0	20.0	0.0
14	1.30	835	0	7620	0	20.0	0.0
15	1.40	895	0	8160	0	20.0	0.0
16	1.50	954	0	8700	0	20.0	0.0
17	1.60	1014	0	9240	0	20.0	0.0
18	1.70	1074	0	9780	0	20.0	0.0
19	1.80	1134	0	10320	0	20.0	0.0
20	1.90	1193	0	10860	0	20.0	0.0
21	2.00	1253	0	11400	0	20.0	0.0
22	2.10	1313	0	11940	0	20.0	0.0
23	2.20	1372	0	12480	0	20.0	0.0
24	2.30	1432	0	13020	0	20.0	0.0
25	2.40	1492	0	13560	0	20.0	0.0
26	2.50	1551	0	14100	0	20.0	0.0
27	2.60	1611	0	14640	0	20.0	0.0
28	2.70	1671	0	15180	0	20.0	0.0
29	2.80	1730	0	15720	0	20.0	0.0
30	2.90	1790	0	16260	0	20.0	0.0
31	3.00	1850	0	16800	0	20.0	0.0
32	3.10	1909	0	17340	0	20.0	0.0
33	3.20	1969	0	17880	0	20.0	0.0
34	3.30	2029	0	18420	0	20.0	0.0
35	3.40	2088	0	18960	0	20.0	0.0
36	3.50	2148	0	19500	0	20.0	0.0
37	3.60	2208	0	20040	0	20.0	0.0
38	3.70	2267	0	20580	0	20.0	0.0
39	3.80	2327	0	21120	0	20.0	0.0
40	3.90	2384	0	21633	0	20.0	0.0
41	3.98	2426	0	22011	0	20.0	0.0
42	4.00	1343	0	25109	4682	20.0	0.0
43	4.02	0	0	28348	4743	13.0	0.0
44	4.10	0	0	29043	4987	13.0	0.0
45	4.20	0	0	29853	5154	13.0	0.0
46	4.30	1068	0	30598	5330	13.0	0.0
47	4.40	1928	0	31282	5504	13.0	0.0
48	4.50	1746	0	31935	5678	13.0	0.0
49	4.60	1796	0	32570	5850	13.0	0.0
50	4.70	1843	0	33193	6022	13.0	0.0
51	4.80	1890	0	33810	6193	13.0	0.0
52	4.90	957	0	34422	6363	13.0	0.0
53	5.00	0	0	35032	6532	13.0	0.0
54	5.10	0	0	35639	6701	13.0	0.0
55	5.20	0	0	36244	6868	13.0	0.0

56	5.30	0	0	36849	7035	13.0	0.0
57	5.40	0	0	37453	7200	13.0	0.0
58	5.50	0	0	38056	7365	13.0	0.0
59	5.60	0	0	38659	7529	13.0	0.0
60	5.70	0	0	39261	7693	13.0	0.0
61	5.80	0	0	39864	7855	13.0	0.0
62	5.90	0	0	40466	8017	13.0	0.0
63	6.00	0	0	41068	8177	13.0	0.0
64	6.10	0	0	41670	8337	13.0	0.0
65	6.20	0	0	42272	8497	13.0	0.0
66	6.30	0	0	42874	8655	13.0	0.0
67	6.40	0	0	43476	8813	13.0	0.0
68	6.50	0	0	44078	8970	13.0	0.0
69	6.60	0	0	44679	9126	13.0	0.0
70	6.70	12	0	45281	9281	13.0	0.0
71	6.80	65	0	45883	9435	13.0	0.0
72	6.90	146	0	46455	9581	13.0	0.0
73	6.98	209	0	46877	9688	13.0	0.0
74	7.00	302	0	137696	12875	24.0	0.0
75	7.02	186	0	221160	16091	24.0	0.0
76	7.10	0	0	208953	16276	24.0	0.0
77	7.20	0	0	201788	16528	24.0	0.0
78	7.30	0	0	198570	16794	24.0	0.0
79	7.40	0	0	196911	17059	24.0	0.0
80	7.50	0	0	195926	17324	24.0	0.0
81	7.60	0	0	195285	17590	24.0	0.0
82	7.70	0	0	194838	17855	24.0	0.0
83	7.80	0	0	190415	18120	24.0	0.0
84	7.90	0	0	186355	18385	24.0	0.0
85	8.00	0	0	186396	18649	24.0	0.0
86	8.10	0	0	185926	18914	24.0	0.0
87	8.20	0	0	185252	19178	24.0	0.0
88	8.30	0	0	184565	19442	24.0	0.0
89	8.40	0	0	183858	19706	24.0	0.0
90	8.50	0	0	183123	19970	24.0	0.0
91	8.60	0	0	182350	20233	24.0	0.0
92	8.70	0	0	181534	20496	24.0	0.0
93	8.80	0	0	180666	20760	24.0	0.0
94	8.90	0	0	179733	21023	24.0	0.0
95	9.00	0	0	180502	21285	24.0	0.0
96	9.10	0	0	182488	21548	24.0	0.0
97	9.20	0	0	183236	21810	24.0	0.0
98	9.30	0	0	183258	22073	24.0	0.0
99	9.40	0	0	183254	22335	24.0	0.0
100	9.50	0	0	183218	22597	24.0	0.0
101	9.60	0	0	183147	22859	24.0	0.0
102	9.70	0	0	161610	23120	24.0	0.0
103	9.80	0	0	134389	23382	24.0	0.0
104	9.90	0	0	129264	23643	24.0	0.0
105	10.00	0	0	130474	23904	24.0	0.0
106	10.10	0	0	131685	24165	24.0	0.0
107	10.20	0	0	132896	24426	24.0	0.0
108	10.30	0	0	134106	24687	24.0	0.0
109	10.40	0	0	135318	24947	24.0	0.0
110	10.50	0	0	136529	25208	24.0	0.0
111	10.60	0	0	137741	25468	24.0	0.0
112	10.70	0	0	138953	25728	24.0	0.0

Relazione e fascicolo di calcolo strutturale

113	10.80	0	0	140165	25988	24.0	0.0
114	10.90	0	0	141377	26248	24.0	0.0
115	11.00	0	0	142589	26508	24.0	0.0
116	11.10	0	0	143802	26767	24.0	0.0
117	11.20	0	0	145015	27027	24.0	0.0
118	11.30	0	0	146228	27286	24.0	0.0
119	11.40	0	0	147441	27546	24.0	0.0
120	11.50	0	0	148654	27805	24.0	0.0
121	11.60	0	0	149868	28064	24.0	0.0
122	11.70	0	0	151081	28323	24.0	0.0
123	11.80	0	0	152295	28581	24.0	0.0
124	11.90	0	0	153509	28840	24.0	0.0
125	12.00	0	0	154723	29099	24.0	0.0

### Combinazione n° 8

n°	Y(m)	$\sigma_{am}$	$\sigma_{av}$	$\sigma_{pm}$	$\sigma_{pv}$	$\delta_a$	$\delta_p$
1	0.00	72	0	484	0	16.2	0.0
2	0.10	145	0	926	0	16.2	0.0
3	0.20	218	0	1369	0	16.2	0.0
4	0.30	290	0	1809	0	16.2	0.0
5	0.40	363	0	2249	0	16.2	0.0
6	0.50	435	0	2689	0	16.2	0.0
7	0.60	507	0	3129	0	16.2	0.0
8	0.70	580	0	3569	0	16.2	0.0
9	0.80	652	0	4008	0	16.2	0.0
10	0.90	725	0	4448	0	16.2	0.0
11	1.00	797	0	4888	0	16.2	0.0
12	1.10	869	0	5328	0	16.2	0.0
13	1.20	942	0	5768	0	16.2	0.0
14	1.30	1014	0	6208	0	16.2	0.0
15	1.40	1087	0	6648	0	16.2	0.0
16	1.50	1159	0	7088	0	16.2	0.0
17	1.60	1232	0	7528	0	16.2	0.0
18	1.70	1304	0	7968	0	16.2	0.0
19	1.80	1376	0	8408	0	16.2	0.0
20	1.90	1449	0	8848	0	16.2	0.0
21	2.00	1521	0	9288	0	16.2	0.0
22	2.10	1594	0	9728	0	16.2	0.0
23	2.20	1666	0	10168	0	16.2	0.0
24	2.30	1739	0	10608	0	16.2	0.0
25	2.40	1811	0	11048	0	16.2	0.0
26	2.50	1883	0	11488	0	16.2	0.0
27	2.60	1956	0	11928	0	16.2	0.0
28	2.70	2028	0	12368	0	16.2	0.0
29	2.80	2101	0	12808	0	16.2	0.0
30	2.90	2173	0	13248	0	16.2	0.0
31	3.00	2246	0	13688	0	16.2	0.0
32	3.10	2318	0	14127	0	16.2	0.0
33	3.20	2390	0	14567	0	16.2	0.0
34	3.30	2463	0	15007	0	16.2	0.0
35	3.40	2535	0	15447	0	16.2	0.0
36	3.50	2608	0	15887	0	16.2	0.0
37	3.60	2680	0	16327	0	16.2	0.0
38	3.70	2753	0	16767	0	16.2	0.0
39	3.80	2825	0	17207	0	16.2	0.0

Relazione e fascicolo di calcolo strutturale

40	3.90	2894	0	17625	0	16.2	0.0
41	3.98	2945	0	17933	0	16.2	0.0
42	4.00	1619	0	20580	3634	16.2	0.0
43	4.02	0	0	23269	3685	10.5	0.0
44	4.10	0	0	23676	3890	10.5	0.0
45	4.20	0	0	24191	4041	10.5	0.0
46	4.30	2428	0	24705	4198	10.5	0.0
47	4.40	3693	0	25202	4355	10.5	0.0
48	4.50	2564	0	25691	4511	10.5	0.0
49	4.60	2633	0	26174	4665	10.5	0.0
50	4.70	2703	0	26655	4818	10.5	0.0
51	4.80	1369	0	27133	4970	10.5	0.0
52	4.90	0	0	27610	5121	10.5	0.0
53	5.00	0	0	28086	5271	10.5	0.0
54	5.10	0	0	28562	5420	10.5	0.0
55	5.20	9	0	29037	5567	10.5	0.0
56	5.30	74	0	29512	5714	10.5	0.0
57	5.40	184	0	29987	5859	10.5	0.0
58	5.50	293	0	30461	6003	10.5	0.0
59	5.60	400	0	30936	6146	10.5	0.0
60	5.70	503	0	31410	6288	10.5	0.0
61	5.80	608	0	31883	6429	10.5	0.0
62	5.90	712	0	32357	6568	10.5	0.0
63	6.00	816	0	32831	6707	10.5	0.0
64	6.10	919	0	33304	6844	10.5	0.0
65	6.20	1020	0	33777	6980	10.5	0.0
66	6.30	1122	0	34250	7115	10.5	0.0
67	6.40	1223	0	34723	7249	10.5	0.0
68	6.50	1323	0	35196	7382	10.5	0.0
69	6.60	1425	0	35669	7514	10.5	0.0
70	6.70	1526	0	36142	7644	10.5	0.0
71	6.80	1626	0	36614	7773	10.5	0.0
72	6.90	1720	0	37063	7895	10.5	0.0
73	6.98	1793	0	37394	7984	10.5	0.0
74	7.00	1054	0	83983	10420	19.6	0.0
75	7.02	144	0	128374	12879	19.6	0.0
76	7.10	0	0	124453	13031	19.6	0.0
77	7.20	0	0	121711	13237	19.6	0.0
78	7.30	0	0	120390	13454	19.6	0.0
79	7.40	0	0	119776	13670	19.6	0.0
80	7.50	0	0	119513	13887	19.6	0.0
81	7.60	0	0	119447	14104	19.6	0.0
82	7.70	0	0	119501	14320	19.6	0.0
83	7.80	0	0	119633	14536	19.6	0.0
84	7.90	0	0	119817	14752	19.6	0.0
85	8.00	0	0	120036	14967	19.6	0.0
86	8.10	0	0	119516	15182	19.6	0.0
87	8.20	0	0	117017	15398	19.6	0.0
88	8.30	0	0	116207	15612	19.6	0.0
89	8.40	0	0	117425	15827	19.6	0.0
90	8.50	0	0	117672	16041	19.6	0.0
91	8.60	0	0	117835	16255	19.6	0.0
92	8.70	0	0	117996	16469	19.6	0.0
93	8.80	0	0	118153	16682	19.6	0.0
94	8.90	0	0	118302	16895	19.6	0.0
95	9.00	0	0	118444	17108	19.6	0.0
96	9.10	0	0	118576	17320	19.6	0.0

Relazione e fascicolo di calcolo strutturale

97	9.20	0	0	118697	17533	19.6	0.0
98	9.30	0	0	118805	17745	19.6	0.0
99	9.40	0	0	118899	17957	19.6	0.0
100	9.50	0	0	118974	18168	19.6	0.0
101	9.60	0	0	119947	18379	19.6	0.0
102	9.70	0	0	121432	18590	19.6	0.0
103	9.80	0	0	122204	18801	19.6	0.0
104	9.90	0	0	122661	19012	19.6	0.0
105	10.00	0	0	123112	19222	19.6	0.0
106	10.10	0	0	123557	19432	19.6	0.0
107	10.20	0	0	123994	19642	19.6	0.0
108	10.30	0	0	124424	19851	19.6	0.0
109	10.40	0	0	124844	20061	19.6	0.0
110	10.50	16	0	125256	20270	19.6	0.0
111	10.60	62	0	125657	20479	19.6	0.0
112	10.70	120	0	126047	20687	19.6	0.0
113	10.80	178	0	115129	20896	19.6	0.0
114	10.90	235	43	103118	21104	19.6	0.0
115	11.00	292	88	102662	21312	19.6	0.0
116	11.10	350	134	103550	21520	19.6	0.0
117	11.20	409	179	104439	21727	19.6	0.0
118	11.30	467	225	105329	21934	19.6	0.0
119	11.40	524	272	106218	22142	19.6	0.0
120	11.50	582	316	107108	22348	19.6	0.0
121	11.60	641	362	107997	22555	19.6	0.0
122	11.70	699	409	108887	22762	19.6	0.0
123	11.80	758	453	109777	22968	19.6	0.0
124	11.90	817	499	110667	23174	19.6	0.0
125	12.00	874	546	111558	23380	19.6	0.0

### Combinazione n° 9

n°	Y(m)	$\sigma_{am}$	$\sigma_{av}$	$\sigma_{pm}$	$\sigma_{pv}$	$\delta_a$	$\delta_p$
1	0.00	59	0	594	0	20.0	0.0
2	0.10	113	0	1137	0	20.0	0.0
3	0.20	166	0	1680	0	20.0	0.0
4	0.30	220	0	2220	0	20.0	0.0
5	0.40	274	0	2760	0	20.0	0.0
6	0.50	327	0	3300	0	20.0	0.0
7	0.60	381	0	3840	0	20.0	0.0
8	0.70	434	0	4380	0	20.0	0.0
9	0.80	488	0	4920	0	20.0	0.0
10	0.90	541	0	5460	0	20.0	0.0
11	1.00	595	0	6000	0	20.0	0.0
12	1.10	648	0	6540	0	20.0	0.0
13	1.20	702	0	7080	0	20.0	0.0
14	1.30	755	0	7620	0	20.0	0.0
15	1.40	809	0	8160	0	20.0	0.0
16	1.50	862	0	8700	0	20.0	0.0
17	1.60	916	0	9240	0	20.0	0.0
18	1.70	969	0	9780	0	20.0	0.0
19	1.80	1023	0	10320	0	20.0	0.0
20	1.90	1076	0	10860	0	20.0	0.0
21	2.00	1130	0	11400	0	20.0	0.0
22	2.10	1183	0	11940	0	20.0	0.0
23	2.20	1237	0	12480	0	20.0	0.0

Relazione e fascicolo di calcolo strutturale

24	2.30	1290	0	13020	0	20.0	0.0
25	2.40	1344	0	13560	0	20.0	0.0
26	2.50	1397	0	14100	0	20.0	0.0
27	2.60	1451	0	14640	0	20.0	0.0
28	2.70	1504	0	15180	0	20.0	0.0
29	2.80	1558	0	15720	0	20.0	0.0
30	2.90	1611	0	16260	0	20.0	0.0
31	3.00	1665	0	16800	0	20.0	0.0
32	3.10	1718	0	17340	0	20.0	0.0
33	3.20	1772	0	17880	0	20.0	0.0
34	3.30	1826	0	18420	0	20.0	0.0
35	3.40	1879	0	18960	0	20.0	0.0
36	3.50	1933	0	19500	0	20.0	0.0
37	3.60	1986	0	20040	0	20.0	0.0
38	3.70	2040	0	20580	0	20.0	0.0
39	3.80	2093	0	21120	0	20.0	0.0
40	3.90	2144	0	21633	0	20.0	0.0
41	3.98	2181	0	22011	0	20.0	0.0
42	4.00	1097	0	25109	4682	20.0	0.0
43	4.02	0	0	28348	4743	13.0	0.0
44	4.10	0	0	29043	4987	13.0	0.0
45	4.20	0	0	29853	5154	13.0	0.0
46	4.30	1068	0	30598	5330	13.0	0.0
47	4.40	1928	0	31282	5504	13.0	0.0
48	4.50	1746	0	31935	5678	13.0	0.0
49	4.60	1796	0	32570	5850	13.0	0.0
50	4.70	1843	0	33193	6022	13.0	0.0
51	4.80	1890	0	33810	6193	13.0	0.0
52	4.90	957	0	34422	6363	13.0	0.0
53	5.00	0	0	35032	6532	13.0	0.0
54	5.10	0	0	35639	6701	13.0	0.0
55	5.20	0	0	36244	6868	13.0	0.0
56	5.30	0	0	36849	7035	13.0	0.0
57	5.40	0	0	37453	7200	13.0	0.0
58	5.50	0	0	38056	7365	13.0	0.0
59	5.60	0	0	38659	7529	13.0	0.0
60	5.70	0	0	39261	7693	13.0	0.0
61	5.80	0	0	39864	7855	13.0	0.0
62	5.90	0	0	40466	8017	13.0	0.0
63	6.00	0	0	41068	8177	13.0	0.0
64	6.10	0	0	41670	8337	13.0	0.0
65	6.20	0	0	42272	8497	13.0	0.0
66	6.30	0	0	42874	8655	13.0	0.0
67	6.40	0	0	43476	8813	13.0	0.0
68	6.50	0	0	44078	8970	13.0	0.0
69	6.60	0	0	44679	9126	13.0	0.0
70	6.70	12	0	45281	9281	13.0	0.0
71	6.80	65	0	45883	9435	13.0	0.0
72	6.90	146	0	46455	9581	13.0	0.0
73	6.98	209	0	46877	9688	13.0	0.0
74	7.00	302	0	137696	12875	24.0	0.0
75	7.02	186	0	221160	16091	24.0	0.0
76	7.10	0	0	208953	16276	24.0	0.0
77	7.20	0	0	201788	16528	24.0	0.0
78	7.30	0	0	198570	16794	24.0	0.0
79	7.40	0	0	196911	17059	24.0	0.0
80	7.50	0	0	195926	17324	24.0	0.0

Relazione e fascicolo di calcolo strutturale

81	7.60	0	0	195285	17590	24.0	0.0
82	7.70	0	0	194838	17855	24.0	0.0
83	7.80	0	0	190415	18120	24.0	0.0
84	7.90	0	0	186355	18385	24.0	0.0
85	8.00	0	0	186396	18649	24.0	0.0
86	8.10	0	0	185926	18914	24.0	0.0
87	8.20	0	0	185252	19178	24.0	0.0
88	8.30	0	0	184565	19442	24.0	0.0
89	8.40	0	0	183858	19706	24.0	0.0
90	8.50	0	0	183123	19970	24.0	0.0
91	8.60	0	0	182350	20233	24.0	0.0
92	8.70	0	0	181534	20496	24.0	0.0
93	8.80	0	0	180666	20760	24.0	0.0
94	8.90	0	0	179733	21023	24.0	0.0
95	9.00	0	0	180502	21285	24.0	0.0
96	9.10	0	0	182488	21548	24.0	0.0
97	9.20	0	0	183236	21810	24.0	0.0
98	9.30	0	0	183258	22073	24.0	0.0
99	9.40	0	0	183254	22335	24.0	0.0
100	9.50	0	0	183218	22597	24.0	0.0
101	9.60	0	0	183147	22859	24.0	0.0
102	9.70	0	0	161610	23120	24.0	0.0
103	9.80	0	0	134389	23382	24.0	0.0
104	9.90	0	0	129264	23643	24.0	0.0
105	10.00	0	0	130474	23904	24.0	0.0
106	10.10	0	0	131685	24165	24.0	0.0
107	10.20	0	0	132896	24426	24.0	0.0
108	10.30	0	0	134106	24687	24.0	0.0
109	10.40	0	0	135318	24947	24.0	0.0
110	10.50	0	0	136529	25208	24.0	0.0
111	10.60	0	0	137741	25468	24.0	0.0
112	10.70	0	0	138953	25728	24.0	0.0
113	10.80	0	0	140165	25988	24.0	0.0
114	10.90	0	0	141377	26248	24.0	0.0
115	11.00	0	0	142589	26508	24.0	0.0
116	11.10	0	0	143802	26767	24.0	0.0
117	11.20	0	0	145015	27027	24.0	0.0
118	11.30	0	0	146228	27286	24.0	0.0
119	11.40	0	0	147441	27546	24.0	0.0
120	11.50	0	0	148654	27805	24.0	0.0
121	11.60	0	0	149868	28064	24.0	0.0
122	11.70	0	0	151081	28323	24.0	0.0
123	11.80	0	0	152295	28581	24.0	0.0
124	11.90	0	0	153509	28840	24.0	0.0
125	12.00	0	0	154723	29099	24.0	0.0

### Combinazione n° 10

n°	Y(m)	$\sigma_{am}$	$\sigma_{av}$	$\sigma_{pm}$	$\sigma_{pv}$	$\delta_a$	$\delta_p$
1	0.00	147	0	1485	0	20.0	0.0
2	0.10	201	0	2032	0	20.0	0.0
3	0.20	256	0	2580	0	20.0	0.0
4	0.30	309	0	3120	0	20.0	0.0
5	0.40	363	0	3660	0	20.0	0.0
6	0.50	416	0	4200	0	20.0	0.0
7	0.60	470	0	4740	0	20.0	0.0

8	0.70	523	0	5280	0	20.0	0.0
9	0.80	577	0	5820	0	20.0	0.0
10	0.90	630	0	6360	0	20.0	0.0
11	1.00	684	0	6900	0	20.0	0.0
12	1.10	737	0	7440	0	20.0	0.0
13	1.20	791	0	7980	0	20.0	0.0
14	1.30	844	0	8520	0	20.0	0.0
15	1.40	898	0	9060	0	20.0	0.0
16	1.50	951	0	9600	0	20.0	0.0
17	1.60	1005	0	10140	0	20.0	0.0
18	1.70	1058	0	10680	0	20.0	0.0
19	1.80	1112	0	11220	0	20.0	0.0
20	1.90	1165	0	11760	0	20.0	0.0
21	2.00	1219	0	12300	0	20.0	0.0
22	2.10	1273	0	12840	0	20.0	0.0
23	2.20	1326	0	13380	0	20.0	0.0
24	2.30	1380	0	13920	0	20.0	0.0
25	2.40	1433	0	14460	0	20.0	0.0
26	2.50	1487	0	15000	0	20.0	0.0
27	2.60	1540	0	15540	0	20.0	0.0
28	2.70	1594	0	16080	0	20.0	0.0
29	2.80	1647	0	16620	0	20.0	0.0
30	2.90	1701	0	17160	0	20.0	0.0
31	3.00	1754	0	17700	0	20.0	0.0
32	3.10	1808	0	18240	0	20.0	0.0
33	3.20	1861	0	18780	0	20.0	0.0
34	3.30	1915	0	19320	0	20.0	0.0
35	3.40	1968	0	19860	0	20.0	0.0
36	3.50	2022	0	20400	0	20.0	0.0
37	3.60	2075	0	20940	0	20.0	0.0
38	3.70	2129	0	21480	0	20.0	0.0
39	3.80	2182	0	22020	0	20.0	0.0
40	3.90	2233	0	22533	0	20.0	0.0
41	3.98	2271	0	22911	0	20.0	0.0
42	4.00	1142	0	25469	4682	20.0	0.0
43	4.02	0	0	28206	4743	13.0	0.0
44	4.10	0	0	28998	4987	13.0	0.0
45	4.20	0	0	29915	5154	13.0	0.0
46	4.30	446	0	30742	5330	13.0	0.0
47	4.40	1345	0	31484	5504	13.0	0.0
48	4.50	1817	0	32177	5678	13.0	0.0
49	4.60	1858	0	32842	5850	13.0	0.0
50	4.70	1905	0	33488	6022	13.0	0.0
51	4.80	1952	0	34122	6193	13.0	0.0
52	4.90	988	0	34748	6363	13.0	0.0
53	5.00	0	0	35368	6532	13.0	0.0
54	5.10	0	0	35983	6701	13.0	0.0
55	5.20	0	0	36596	6868	13.0	0.0
56	5.30	0	0	37206	7035	13.0	0.0
57	5.40	0	0	37815	7200	13.0	0.0
58	5.50	0	0	38422	7365	13.0	0.0
59	5.60	0	0	39028	7529	13.0	0.0
60	5.70	0	0	39633	7693	13.0	0.0
61	5.80	0	0	40237	7855	13.0	0.0
62	5.90	0	0	40841	8017	13.0	0.0
63	6.00	0	0	41445	8177	13.0	0.0
64	6.10	0	0	42048	8337	13.0	0.0



Relazione e fascicolo di calcolo strutturale

65	6.20	0	0	42651	8497	13.0	0.0
66	6.30	0	0	43253	8655	13.0	0.0
67	6.40	0	0	43856	8813	13.0	0.0
68	6.50	0	0	44458	8970	13.0	0.0
69	6.60	38	0	45060	9126	13.0	0.0
70	6.70	120	0	45663	9281	13.0	0.0
71	6.80	207	0	46265	9435	13.0	0.0
72	6.90	288	0	46837	9581	13.0	0.0
73	6.98	349	0	47258	9688	13.0	0.0
74	7.00	466	0	140980	12875	24.0	0.0
75	7.02	279	0	226405	16091	24.0	0.0
76	7.10	0	0	212724	16276	24.0	0.0
77	7.20	0	0	204815	16528	24.0	0.0
78	7.30	0	0	201279	16794	24.0	0.0
79	7.40	0	0	199453	17059	24.0	0.0
80	7.50	0	0	198366	17324	24.0	0.0
81	7.60	0	0	197657	17590	24.0	0.0
82	7.70	0	0	197162	17855	24.0	0.0
83	7.80	0	0	192461	18120	24.0	0.0
84	7.90	0	0	189392	18385	24.0	0.0
85	8.00	0	0	193233	18649	24.0	0.0
86	8.10	0	0	195652	18914	24.0	0.0
87	8.20	0	0	195383	19178	24.0	0.0
88	8.30	0	0	194832	19442	24.0	0.0
89	8.40	0	0	194255	19706	24.0	0.0
90	8.50	0	0	193648	19970	24.0	0.0
91	8.60	0	0	193007	20233	24.0	0.0
92	8.70	0	0	192327	20496	24.0	0.0
93	8.80	0	0	191604	20760	24.0	0.0
94	8.90	0	0	190833	21023	24.0	0.0
95	9.00	0	0	190007	21285	24.0	0.0
96	9.10	0	0	191896	21548	24.0	0.0
97	9.20	0	0	197446	21810	24.0	0.0
98	9.30	0	0	200848	22073	24.0	0.0
99	9.40	0	0	201080	22335	24.0	0.0
100	9.50	0	0	201195	22597	24.0	0.0
101	9.60	0	0	201285	22859	24.0	0.0
102	9.70	0	0	194463	23120	24.0	0.0
103	9.80	0	0	158362	23382	24.0	0.0
104	9.90	0	0	129722	23643	24.0	0.0
105	10.00	0	0	130922	23904	24.0	0.0
106	10.10	0	0	132123	24165	24.0	0.0
107	10.20	0	0	133325	24426	24.0	0.0
108	10.30	0	0	134527	24687	24.0	0.0
109	10.40	0	0	135729	24947	24.0	0.0
110	10.50	0	0	136932	25208	24.0	0.0
111	10.60	0	0	138136	25468	24.0	0.0
112	10.70	0	0	139340	25728	24.0	0.0
113	10.80	0	0	140544	25988	24.0	0.0
114	10.90	0	0	141749	26248	24.0	0.0
115	11.00	0	0	142954	26508	24.0	0.0
116	11.10	0	0	144160	26767	24.0	0.0
117	11.20	0	0	145365	27027	24.0	0.0
118	11.30	0	0	146572	27286	24.0	0.0
119	11.40	0	0	147778	27546	24.0	0.0
120	11.50	0	0	148985	27805	24.0	0.0
121	11.60	0	0	150192	28064	24.0	0.0

Relazione e fascicolo di calcolo strutturale

122	11.70	0	0	151400	28323	24.0	0.0
123	11.80	0	0	152608	28581	24.0	0.0
124	11.90	0	0	153816	28840	24.0	0.0
125	12.00	0	0	155024	29099	24.0	0.0

### Combinazione n° 11

n°	Y(m)	$\sigma_{am}$	$\sigma_{av}$	$\sigma_{pm}$	$\sigma_{pv}$	$\delta_a$	$\delta_p$
1	0.00	294	0	2970	0	20.0	0.0
2	0.10	349	0	3525	0	20.0	0.0
3	0.20	404	0	4080	0	20.0	0.0
4	0.30	458	0	4620	0	20.0	0.0
5	0.40	511	0	5160	0	20.0	0.0
6	0.50	565	0	5700	0	20.0	0.0
7	0.60	618	0	6240	0	20.0	0.0
8	0.70	672	0	6780	0	20.0	0.0
9	0.80	725	0	7320	0	20.0	0.0
10	0.90	779	0	7860	0	20.0	0.0
11	1.00	832	0	8400	0	20.0	0.0
12	1.10	886	0	8940	0	20.0	0.0
13	1.20	940	0	9480	0	20.0	0.0
14	1.30	993	0	10020	0	20.0	0.0
15	1.40	1047	0	10560	0	20.0	0.0
16	1.50	1100	0	11100	0	20.0	0.0
17	1.60	1154	0	11640	0	20.0	0.0
18	1.70	1207	0	12180	0	20.0	0.0
19	1.80	1261	0	12720	0	20.0	0.0
20	1.90	1314	0	13260	0	20.0	0.0
21	2.00	1368	0	13800	0	20.0	0.0
22	2.10	1421	0	14340	0	20.0	0.0
23	2.20	1475	0	14880	0	20.0	0.0
24	2.30	1528	0	15420	0	20.0	0.0
25	2.40	1582	0	15960	0	20.0	0.0
26	2.50	1635	0	16500	0	20.0	0.0
27	2.60	1689	0	17040	0	20.0	0.0
28	2.70	1742	0	17580	0	20.0	0.0
29	2.80	1796	0	18120	0	20.0	0.0
30	2.90	1849	0	18660	0	20.0	0.0
31	3.00	1903	0	19200	0	20.0	0.0
32	3.10	1956	0	19740	0	20.0	0.0
33	3.20	2010	0	20280	0	20.0	0.0
34	3.30	2063	0	20820	0	20.0	0.0
35	3.40	2117	0	21360	0	20.0	0.0
36	3.50	2170	0	21900	0	20.0	0.0
37	3.60	2224	0	22440	0	20.0	0.0
38	3.70	2277	0	22980	0	20.0	0.0
39	3.80	2331	0	23520	0	20.0	0.0
40	3.90	2382	0	24033	0	20.0	0.0
41	3.98	2419	0	24411	0	20.0	0.0
42	4.00	1216	0	26065	4682	20.0	0.0
43	4.02	0	0	27945	4743	13.0	0.0
44	4.10	0	0	28870	4987	13.0	0.0
45	4.20	0	0	29956	5154	13.0	0.0
46	4.30	0	0	30922	5330	13.0	0.0
47	4.40	1430	0	31766	5504	13.0	0.0
48	4.50	2391	0	32535	5678	13.0	0.0

Relazione e fascicolo di calcolo strutturale

49	4.60	1953	0	33255	5850	13.0	0.0
50	4.70	2007	0	33944	6022	13.0	0.0
51	4.80	2054	0	34611	6193	13.0	0.0
52	4.90	1039	0	35263	6363	13.0	0.0
53	5.00	0	0	35903	6532	13.0	0.0
54	5.10	0	0	36536	6701	13.0	0.0
55	5.20	0	0	37162	6868	13.0	0.0
56	5.30	0	0	37784	7035	13.0	0.0
57	5.40	0	0	38402	7200	13.0	0.0
58	5.50	0	0	39017	7365	13.0	0.0
59	5.60	0	0	39629	7529	13.0	0.0
60	5.70	0	0	40240	7693	13.0	0.0
61	5.80	0	0	40849	7855	13.0	0.0
62	5.90	0	0	41457	8017	13.0	0.0
63	6.00	0	0	42064	8177	13.0	0.0
64	6.10	0	0	42670	8337	13.0	0.0
65	6.20	0	0	43275	8497	13.0	0.0
66	6.30	25	0	43879	8655	13.0	0.0
67	6.40	93	0	44483	8813	13.0	0.0
68	6.50	182	0	45087	8970	13.0	0.0
69	6.60	271	0	45690	9126	13.0	0.0
70	6.70	357	0	46293	9281	13.0	0.0
71	6.80	443	0	46896	9435	13.0	0.0
72	6.90	527	0	47468	9581	13.0	0.0
73	6.98	590	0	47890	9688	13.0	0.0
74	7.00	732	0	146718	12875	24.0	0.0
75	7.02	425	0	235493	16091	24.0	0.0
76	7.10	0	0	219120	16276	24.0	0.0
77	7.20	0	0	209906	16528	24.0	0.0
78	7.30	0	0	205824	16794	24.0	0.0
79	7.40	0	0	203713	17059	24.0	0.0
80	7.50	0	0	202452	17324	24.0	0.0
81	7.60	0	0	201626	17590	24.0	0.0
82	7.70	0	0	201047	17855	24.0	0.0
83	7.80	0	0	195991	18120	24.0	0.0
84	7.90	0	0	193470	18385	24.0	0.0
85	8.00	0	0	198954	18649	24.0	0.0
86	8.10	0	0	205793	18914	24.0	0.0
87	8.20	0	0	210862	19178	24.0	0.0
88	8.30	0	0	212066	19442	24.0	0.0
89	8.40	0	0	211619	19706	24.0	0.0
90	8.50	0	0	211145	19970	24.0	0.0
91	8.60	0	0	210641	20233	24.0	0.0
92	8.70	0	0	210106	20496	24.0	0.0
93	8.80	0	0	209538	20760	24.0	0.0
94	8.90	0	0	208933	21023	24.0	0.0
95	9.00	0	0	208290	21285	24.0	0.0
96	9.10	0	0	207604	21548	24.0	0.0
97	9.20	0	0	208233	21810	24.0	0.0
98	9.30	0	0	214242	22073	24.0	0.0
99	9.40	0	0	224299	22335	24.0	0.0
100	9.50	0	0	230322	22597	24.0	0.0
101	9.60	0	0	231392	22859	24.0	0.0
102	9.70	0	0	231544	23120	24.0	0.0
103	9.80	0	0	213444	23382	24.0	0.0
104	9.90	0	0	163279	23643	24.0	0.0
105	10.00	0	0	131878	23904	24.0	0.0

106	10.10	0	0	133061	24165	24.0	0.0
107	10.20	0	0	134245	24426	24.0	0.0
108	10.30	0	0	135430	24687	24.0	0.0
109	10.40	0	0	136615	24947	24.0	0.0
110	10.50	0	0	137802	25208	24.0	0.0
111	10.60	0	0	138989	25468	24.0	0.0
112	10.70	0	0	140177	25728	24.0	0.0
113	10.80	0	0	141366	25988	24.0	0.0
114	10.90	0	0	142556	26248	24.0	0.0
115	11.00	0	0	143747	26508	24.0	0.0
116	11.10	0	0	144938	26767	24.0	0.0
117	11.20	0	0	146130	27027	24.0	0.0
118	11.30	0	0	147322	27286	24.0	0.0
119	11.40	0	0	148516	27546	24.0	0.0
120	11.50	0	0	149709	27805	24.0	0.0
121	11.60	0	0	150904	28064	24.0	0.0
122	11.70	0	0	152099	28323	24.0	0.0
123	11.80	0	0	153295	28581	24.0	0.0
124	11.90	0	0	154491	28840	24.0	0.0
125	12.00	0	0	155688	29099	24.0	0.0

#### Combinazione n° 12

n°	Y(m)	$\sigma_{am}$	$\sigma_{av}$	$\sigma_{pm}$	$\sigma_{pv}$	$\delta_a$	$\delta_p$
1	0.00	59	0	594	0	20.0	0.0
2	0.10	115	0	1137	0	20.0	0.0
3	0.20	172	0	1680	0	20.0	0.0
4	0.30	228	0	2220	0	20.0	0.0
5	0.40	284	0	2760	0	20.0	0.0
6	0.50	341	0	3300	0	20.0	0.0
7	0.60	397	0	3840	0	20.0	0.0
8	0.70	453	0	4380	0	20.0	0.0
9	0.80	510	0	4920	0	20.0	0.0
10	0.90	566	0	5460	0	20.0	0.0
11	1.00	622	0	6000	0	20.0	0.0
12	1.10	678	0	6540	0	20.0	0.0
13	1.20	735	0	7080	0	20.0	0.0
14	1.30	791	0	7620	0	20.0	0.0
15	1.40	847	0	8160	0	20.0	0.0
16	1.50	903	0	8700	0	20.0	0.0
17	1.60	960	0	9240	0	20.0	0.0
18	1.70	1016	0	9780	0	20.0	0.0
19	1.80	1072	0	10320	0	20.0	0.0
20	1.90	1128	0	10860	0	20.0	0.0
21	2.00	1185	0	11400	0	20.0	0.0
22	2.10	1241	0	11940	0	20.0	0.0
23	2.20	1297	0	12480	0	20.0	0.0
24	2.30	1353	0	13020	0	20.0	0.0
25	2.40	1410	0	13560	0	20.0	0.0
26	2.50	1466	0	14100	0	20.0	0.0
27	2.60	1522	0	14640	0	20.0	0.0
28	2.70	1578	0	15180	0	20.0	0.0
29	2.80	1635	0	15720	0	20.0	0.0
30	2.90	1691	0	16260	0	20.0	0.0
31	3.00	1747	0	16800	0	20.0	0.0
32	3.10	1803	0	17340	0	20.0	0.0

Relazione e fascicolo di calcolo strutturale

33	3.20	1860	0	17880	0	20.0	0.0
34	3.30	1916	0	18420	0	20.0	0.0
35	3.40	1972	0	18960	0	20.0	0.0
36	3.50	2028	0	19500	0	20.0	0.0
37	3.60	2085	0	20040	0	20.0	0.0
38	3.70	2141	0	20580	0	20.0	0.0
39	3.80	2197	0	21120	0	20.0	0.0
40	3.90	2251	0	21633	0	20.0	0.0
41	3.98	2290	0	22011	0	20.0	0.0
42	4.00	1207	0	25109	4682	20.0	0.0
43	4.02	0	0	28348	4743	13.0	0.0
44	4.10	0	0	29043	4987	13.0	0.0
45	4.20	0	0	29853	5154	13.0	0.0
46	4.30	1068	0	30598	5330	13.0	0.0
47	4.40	1928	0	31282	5504	13.0	0.0
48	4.50	1746	0	31935	5678	13.0	0.0
49	4.60	1796	0	32570	5850	13.0	0.0
50	4.70	1843	0	33193	6022	13.0	0.0
51	4.80	1890	0	33810	6193	13.0	0.0
52	4.90	957	0	34422	6363	13.0	0.0
53	5.00	0	0	35032	6532	13.0	0.0
54	5.10	0	0	35639	6701	13.0	0.0
55	5.20	0	0	36244	6868	13.0	0.0
56	5.30	0	0	36849	7035	13.0	0.0
57	5.40	0	0	37453	7200	13.0	0.0
58	5.50	0	0	38056	7365	13.0	0.0
59	5.60	0	0	38659	7529	13.0	0.0
60	5.70	0	0	39261	7693	13.0	0.0
61	5.80	0	0	39864	7855	13.0	0.0
62	5.90	0	0	40466	8017	13.0	0.0
63	6.00	0	0	41068	8177	13.0	0.0
64	6.10	0	0	41670	8337	13.0	0.0
65	6.20	0	0	42272	8497	13.0	0.0
66	6.30	0	0	42874	8655	13.0	0.0
67	6.40	0	0	43476	8813	13.0	0.0
68	6.50	0	0	44078	8970	13.0	0.0
69	6.60	0	0	44679	9126	13.0	0.0
70	6.70	12	0	45281	9281	13.0	0.0
71	6.80	65	0	45883	9435	13.0	0.0
72	6.90	146	0	46455	9581	13.0	0.0
73	6.98	209	0	46877	9688	13.0	0.0
74	7.00	302	0	137696	12875	24.0	0.0
75	7.02	186	0	221160	16091	24.0	0.0
76	7.10	0	0	208953	16276	24.0	0.0
77	7.20	0	0	201788	16528	24.0	0.0
78	7.30	0	0	198570	16794	24.0	0.0
79	7.40	0	0	196911	17059	24.0	0.0
80	7.50	0	0	195926	17324	24.0	0.0
81	7.60	0	0	195285	17590	24.0	0.0
82	7.70	0	0	194838	17855	24.0	0.0
83	7.80	0	0	190415	18120	24.0	0.0
84	7.90	0	0	186355	18385	24.0	0.0
85	8.00	0	0	186396	18649	24.0	0.0
86	8.10	0	0	185926	18914	24.0	0.0
87	8.20	0	0	185252	19178	24.0	0.0
88	8.30	0	0	184565	19442	24.0	0.0
89	8.40	0	0	183858	19706	24.0	0.0

90	8.50	0	0	183123	19970	24.0	0.0
91	8.60	0	0	182350	20233	24.0	0.0
92	8.70	0	0	181534	20496	24.0	0.0
93	8.80	0	0	180666	20760	24.0	0.0
94	8.90	0	0	179733	21023	24.0	0.0
95	9.00	0	0	180502	21285	24.0	0.0
96	9.10	0	0	182488	21548	24.0	0.0
97	9.20	0	0	183236	21810	24.0	0.0
98	9.30	0	0	183258	22073	24.0	0.0
99	9.40	0	0	183254	22335	24.0	0.0
100	9.50	0	0	183218	22597	24.0	0.0
101	9.60	0	0	183147	22859	24.0	0.0
102	9.70	0	0	161610	23120	24.0	0.0
103	9.80	0	0	134389	23382	24.0	0.0
104	9.90	0	0	129264	23643	24.0	0.0
105	10.00	0	0	130474	23904	24.0	0.0
106	10.10	0	0	131685	24165	24.0	0.0
107	10.20	0	0	132896	24426	24.0	0.0
108	10.30	0	0	134106	24687	24.0	0.0
109	10.40	0	0	135318	24947	24.0	0.0
110	10.50	0	0	136529	25208	24.0	0.0
111	10.60	0	0	137741	25468	24.0	0.0
112	10.70	0	0	138953	25728	24.0	0.0
113	10.80	0	0	140165	25988	24.0	0.0
114	10.90	0	0	141377	26248	24.0	0.0
115	11.00	0	0	142589	26508	24.0	0.0
116	11.10	0	0	143802	26767	24.0	0.0
117	11.20	0	0	145015	27027	24.0	0.0
118	11.30	0	0	146228	27286	24.0	0.0
119	11.40	0	0	147441	27546	24.0	0.0
120	11.50	0	0	148654	27805	24.0	0.0
121	11.60	0	0	149868	28064	24.0	0.0
122	11.70	0	0	151081	28323	24.0	0.0
123	11.80	0	0	152295	28581	24.0	0.0
124	11.90	0	0	153509	28840	24.0	0.0
125	12.00	0	0	154723	29099	24.0	0.0

### Combinazione n° 13

n°	Y(m)	$\sigma_{am}$	$\sigma_{av}$	$\sigma_{pm}$	$\sigma_{pv}$	$\delta_a$	$\delta_p$
1	0.00	147	0	1485	0	20.0	0.0
2	0.10	204	0	2032	0	20.0	0.0
3	0.20	262	0	2580	0	20.0	0.0
4	0.30	318	0	3120	0	20.0	0.0
5	0.40	375	0	3660	0	20.0	0.0
6	0.50	431	0	4200	0	20.0	0.0
7	0.60	487	0	4740	0	20.0	0.0
8	0.70	544	0	5280	0	20.0	0.0
9	0.80	600	0	5820	0	20.0	0.0
10	0.90	657	0	6360	0	20.0	0.0
11	1.00	713	0	6900	0	20.0	0.0
12	1.10	770	0	7440	0	20.0	0.0
13	1.20	826	0	7980	0	20.0	0.0
14	1.30	883	0	8520	0	20.0	0.0
15	1.40	939	0	9060	0	20.0	0.0
16	1.50	996	0	9600	0	20.0	0.0

Relazione e fascicolo di calcolo strutturale

17	1.60	1052	0	10140	0	20.0	0.0
18	1.70	1109	0	10680	0	20.0	0.0
19	1.80	1165	0	11220	0	20.0	0.0
20	1.90	1222	0	11760	0	20.0	0.0
21	2.00	1278	0	12300	0	20.0	0.0
22	2.10	1335	0	12840	0	20.0	0.0
23	2.20	1391	0	13380	0	20.0	0.0
24	2.30	1448	0	13920	0	20.0	0.0
25	2.40	1504	0	14460	0	20.0	0.0
26	2.50	1560	0	15000	0	20.0	0.0
27	2.60	1617	0	15540	0	20.0	0.0
28	2.70	1673	0	16080	0	20.0	0.0
29	2.80	1730	0	16620	0	20.0	0.0
30	2.90	1786	0	17160	0	20.0	0.0
31	3.00	1843	0	17700	0	20.0	0.0
32	3.10	1899	0	18240	0	20.0	0.0
33	3.20	1956	0	18780	0	20.0	0.0
34	3.30	2012	0	19320	0	20.0	0.0
35	3.40	2069	0	19860	0	20.0	0.0
36	3.50	2125	0	20400	0	20.0	0.0
37	3.60	2182	0	20940	0	20.0	0.0
38	3.70	2238	0	21480	0	20.0	0.0
39	3.80	2295	0	22020	0	20.0	0.0
40	3.90	2348	0	22533	0	20.0	0.0
41	3.98	2388	0	22911	0	20.0	0.0
42	4.00	1260	0	25469	4682	20.0	0.0
43	4.02	0	0	28206	4743	13.0	0.0
44	4.10	0	0	28998	4987	13.0	0.0
45	4.20	0	0	29915	5154	13.0	0.0
46	4.30	446	0	30742	5330	13.0	0.0
47	4.40	1345	0	31484	5504	13.0	0.0
48	4.50	1817	0	32177	5678	13.0	0.0
49	4.60	1858	0	32842	5850	13.0	0.0
50	4.70	1905	0	33488	6022	13.0	0.0
51	4.80	1952	0	34122	6193	13.0	0.0
52	4.90	988	0	34748	6363	13.0	0.0
53	5.00	0	0	35368	6532	13.0	0.0
54	5.10	0	0	35983	6701	13.0	0.0
55	5.20	0	0	36596	6868	13.0	0.0
56	5.30	0	0	37206	7035	13.0	0.0
57	5.40	0	0	37815	7200	13.0	0.0
58	5.50	0	0	38422	7365	13.0	0.0
59	5.60	0	0	39028	7529	13.0	0.0
60	5.70	0	0	39633	7693	13.0	0.0
61	5.80	0	0	40237	7855	13.0	0.0
62	5.90	0	0	40841	8017	13.0	0.0
63	6.00	0	0	41445	8177	13.0	0.0
64	6.10	0	0	42048	8337	13.0	0.0
65	6.20	0	0	42651	8497	13.0	0.0
66	6.30	0	0	43253	8655	13.0	0.0
67	6.40	0	0	43856	8813	13.0	0.0
68	6.50	0	0	44458	8970	13.0	0.0
69	6.60	38	0	45060	9126	13.0	0.0
70	6.70	120	0	45663	9281	13.0	0.0
71	6.80	207	0	46265	9435	13.0	0.0
72	6.90	288	0	46837	9581	13.0	0.0
73	6.98	349	0	47258	9688	13.0	0.0

74	7.00	466	0	140980	12875	24.0	0.0
75	7.02	279	0	226405	16091	24.0	0.0
76	7.10	0	0	212724	16276	24.0	0.0
77	7.20	0	0	204815	16528	24.0	0.0
78	7.30	0	0	201279	16794	24.0	0.0
79	7.40	0	0	199453	17059	24.0	0.0
80	7.50	0	0	198366	17324	24.0	0.0
81	7.60	0	0	197657	17590	24.0	0.0
82	7.70	0	0	197162	17855	24.0	0.0
83	7.80	0	0	192461	18120	24.0	0.0
84	7.90	0	0	189392	18385	24.0	0.0
85	8.00	0	0	193233	18649	24.0	0.0
86	8.10	0	0	195652	18914	24.0	0.0
87	8.20	0	0	195383	19178	24.0	0.0
88	8.30	0	0	194832	19442	24.0	0.0
89	8.40	0	0	194255	19706	24.0	0.0
90	8.50	0	0	193648	19970	24.0	0.0
91	8.60	0	0	193007	20233	24.0	0.0
92	8.70	0	0	192327	20496	24.0	0.0
93	8.80	0	0	191604	20760	24.0	0.0
94	8.90	0	0	190833	21023	24.0	0.0
95	9.00	0	0	190007	21285	24.0	0.0
96	9.10	0	0	191896	21548	24.0	0.0
97	9.20	0	0	197446	21810	24.0	0.0
98	9.30	0	0	200848	22073	24.0	0.0
99	9.40	0	0	201080	22335	24.0	0.0
100	9.50	0	0	201195	22597	24.0	0.0
101	9.60	0	0	201285	22859	24.0	0.0
102	9.70	0	0	194463	23120	24.0	0.0
103	9.80	0	0	158362	23382	24.0	0.0
104	9.90	0	0	129722	23643	24.0	0.0
105	10.00	0	0	130922	23904	24.0	0.0
106	10.10	0	0	132123	24165	24.0	0.0
107	10.20	0	0	133325	24426	24.0	0.0
108	10.30	0	0	134527	24687	24.0	0.0
109	10.40	0	0	135729	24947	24.0	0.0
110	10.50	0	0	136932	25208	24.0	0.0
111	10.60	0	0	138136	25468	24.0	0.0
112	10.70	0	0	139340	25728	24.0	0.0
113	10.80	0	0	140544	25988	24.0	0.0
114	10.90	0	0	141749	26248	24.0	0.0
115	11.00	0	0	142954	26508	24.0	0.0
116	11.10	0	0	144160	26767	24.0	0.0
117	11.20	0	0	145365	27027	24.0	0.0
118	11.30	0	0	146572	27286	24.0	0.0
119	11.40	0	0	147778	27546	24.0	0.0
120	11.50	0	0	148985	27805	24.0	0.0
121	11.60	0	0	150192	28064	24.0	0.0
122	11.70	0	0	151400	28323	24.0	0.0
123	11.80	0	0	152608	28581	24.0	0.0
124	11.90	0	0	153816	28840	24.0	0.0
125	12.00	0	0	155024	29099	24.0	0.0

**Combinazione n° 14**

n°	Y(m)	$\sigma_{am}$	$\sigma_{av}$	$\sigma_{pm}$	$\sigma_{pv}$	$\delta_a$	$\delta_p$
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Relazione e fascicolo di calcolo strutturale

1	0.00	294	0	2970	0	20.0	0.0
2	0.10	353	0	3525	0	20.0	0.0
3	0.20	411	0	4080	0	20.0	0.0
4	0.30	468	0	4620	0	20.0	0.0
5	0.40	525	0	5160	0	20.0	0.0
6	0.50	581	0	5700	0	20.0	0.0
7	0.60	638	0	6240	0	20.0	0.0
8	0.70	695	0	6780	0	20.0	0.0
9	0.80	752	0	7320	0	20.0	0.0
10	0.90	809	0	7860	0	20.0	0.0
11	1.00	866	0	8400	0	20.0	0.0
12	1.10	922	0	8940	0	20.0	0.0
13	1.20	979	0	9480	0	20.0	0.0
14	1.30	1036	0	10020	0	20.0	0.0
15	1.40	1093	0	10560	0	20.0	0.0
16	1.50	1150	0	11100	0	20.0	0.0
17	1.60	1207	0	11640	0	20.0	0.0
18	1.70	1263	0	12180	0	20.0	0.0
19	1.80	1320	0	12720	0	20.0	0.0
20	1.90	1377	0	13260	0	20.0	0.0
21	2.00	1434	0	13800	0	20.0	0.0
22	2.10	1491	0	14340	0	20.0	0.0
23	2.20	1548	0	14880	0	20.0	0.0
24	2.30	1605	0	15420	0	20.0	0.0
25	2.40	1661	0	15960	0	20.0	0.0
26	2.50	1718	0	16500	0	20.0	0.0
27	2.60	1775	0	17040	0	20.0	0.0
28	2.70	1832	0	17580	0	20.0	0.0
29	2.80	1889	0	18120	0	20.0	0.0
30	2.90	1946	0	18660	0	20.0	0.0
31	3.00	2002	0	19200	0	20.0	0.0
32	3.10	2059	0	19740	0	20.0	0.0
33	3.20	2116	0	20280	0	20.0	0.0
34	3.30	2173	0	20820	0	20.0	0.0
35	3.40	2230	0	21360	0	20.0	0.0
36	3.50	2287	0	21900	0	20.0	0.0
37	3.60	2343	0	22440	0	20.0	0.0
38	3.70	2400	0	22980	0	20.0	0.0
39	3.80	2457	0	23520	0	20.0	0.0
40	3.90	2511	0	24033	0	20.0	0.0
41	3.98	2551	0	24411	0	20.0	0.0
42	4.00	1349	0	26065	4682	20.0	0.0
43	4.02	0	0	27945	4743	13.0	0.0
44	4.10	0	0	28870	4987	13.0	0.0
45	4.20	0	0	29956	5154	13.0	0.0
46	4.30	0	0	30922	5330	13.0	0.0
47	4.40	1430	0	31766	5504	13.0	0.0
48	4.50	2391	0	32535	5678	13.0	0.0
49	4.60	1953	0	33255	5850	13.0	0.0
50	4.70	2007	0	33944	6022	13.0	0.0
51	4.80	2054	0	34611	6193	13.0	0.0
52	4.90	1039	0	35263	6363	13.0	0.0
53	5.00	0	0	35903	6532	13.0	0.0
54	5.10	0	0	36536	6701	13.0	0.0
55	5.20	0	0	37162	6868	13.0	0.0
56	5.30	0	0	37784	7035	13.0	0.0
57	5.40	0	0	38402	7200	13.0	0.0

Relazione e fascicolo di calcolo strutturale

58	5.50	0	0	39017	7365	13.0	0.0
59	5.60	0	0	39629	7529	13.0	0.0
60	5.70	0	0	40240	7693	13.0	0.0
61	5.80	0	0	40849	7855	13.0	0.0
62	5.90	0	0	41457	8017	13.0	0.0
63	6.00	0	0	42064	8177	13.0	0.0
64	6.10	0	0	42670	8337	13.0	0.0
65	6.20	0	0	43275	8497	13.0	0.0
66	6.30	25	0	43879	8655	13.0	0.0
67	6.40	93	0	44483	8813	13.0	0.0
68	6.50	182	0	45087	8970	13.0	0.0
69	6.60	271	0	45690	9126	13.0	0.0
70	6.70	357	0	46293	9281	13.0	0.0
71	6.80	443	0	46896	9435	13.0	0.0
72	6.90	527	0	47468	9581	13.0	0.0
73	6.98	590	0	47890	9688	13.0	0.0
74	7.00	732	0	146718	12875	24.0	0.0
75	7.02	425	0	235493	16091	24.0	0.0
76	7.10	0	0	219120	16276	24.0	0.0
77	7.20	0	0	209906	16528	24.0	0.0
78	7.30	0	0	205824	16794	24.0	0.0
79	7.40	0	0	203713	17059	24.0	0.0
80	7.50	0	0	202452	17324	24.0	0.0
81	7.60	0	0	201626	17590	24.0	0.0
82	7.70	0	0	201047	17855	24.0	0.0
83	7.80	0	0	195991	18120	24.0	0.0
84	7.90	0	0	193470	18385	24.0	0.0
85	8.00	0	0	198954	18649	24.0	0.0
86	8.10	0	0	205793	18914	24.0	0.0
87	8.20	0	0	210862	19178	24.0	0.0
88	8.30	0	0	212066	19442	24.0	0.0
89	8.40	0	0	211619	19706	24.0	0.0
90	8.50	0	0	211145	19970	24.0	0.0
91	8.60	0	0	210641	20233	24.0	0.0
92	8.70	0	0	210106	20496	24.0	0.0
93	8.80	0	0	209538	20760	24.0	0.0
94	8.90	0	0	208933	21023	24.0	0.0
95	9.00	0	0	208290	21285	24.0	0.0
96	9.10	0	0	207604	21548	24.0	0.0
97	9.20	0	0	208233	21810	24.0	0.0
98	9.30	0	0	214242	22073	24.0	0.0
99	9.40	0	0	224299	22335	24.0	0.0
100	9.50	0	0	230322	22597	24.0	0.0
101	9.60	0	0	231392	22859	24.0	0.0
102	9.70	0	0	231544	23120	24.0	0.0
103	9.80	0	0	213444	23382	24.0	0.0
104	9.90	0	0	163279	23643	24.0	0.0
105	10.00	0	0	131878	23904	24.0	0.0
106	10.10	0	0	133061	24165	24.0	0.0
107	10.20	0	0	134245	24426	24.0	0.0
108	10.30	0	0	135430	24687	24.0	0.0
109	10.40	0	0	136615	24947	24.0	0.0
110	10.50	0	0	137802	25208	24.0	0.0
111	10.60	0	0	138989	25468	24.0	0.0
112	10.70	0	0	140177	25728	24.0	0.0
113	10.80	0	0	141366	25988	24.0	0.0
114	10.90	0	0	142556	26248	24.0	0.0

*Relazione e fascicolo di calcolo strutturale*

115	11.00	0	0	143747	26508	24.0	0.0
116	11.10	0	0	144938	26767	24.0	0.0
117	11.20	0	0	146130	27027	24.0	0.0
118	11.30	0	0	147322	27286	24.0	0.0
119	11.40	0	0	148516	27546	24.0	0.0
120	11.50	0	0	149709	27805	24.0	0.0
121	11.60	0	0	150904	28064	24.0	0.0
122	11.70	0	0	152099	28323	24.0	0.0
123	11.80	0	0	153295	28581	24.0	0.0
124	11.90	0	0	154491	28840	24.0	0.0
125	12.00	0	0	155688	29099	24.0	0.0

## Analisi della paratia

### L'analisi è stata eseguita per combinazioni di carico

La paratia è analizzata con il metodo degli elementi finiti.

Essa è discretizzata in 80 elementi fuori terra e 160 elementi al di sotto della linea di fondo scavo.

Le molle che simulano il terreno hanno un comportamento elastoplastico: una volta raggiunta la pressione passiva non reagiscono ad ulteriori incremento di carico.

Altezza fuori terra della paratia	4.00	[m]
Profondità di infissione	8.00	[m]
Altezza totale della paratia	12.00	[m]

### Forze agenti sulla paratia

Tutte le forze si intendono positive se dirette da monte verso valle. Esse sono riferite ad un metro di larghezza della paratia. Le Y hanno come origine la testa della paratia, e sono espresse in [m]

Simbologia adottata

$n^\circ$	Indice della Combinazione/Fase
Tipo	Tipo della Combinazione/Fase
$P_a$	Spinta attiva, espressa in [kg]
$I_s$	Incremento sismico della spinta, espressa in [kg]
$P_w$	Spinta della falda, espressa in [kg]
$P_p$	Resistenza passiva, espressa in [kg]
$P_c$	Controspinta, espressa in [kg]

$n^\circ$	Tipo	$P_a$	$Y_{P_a}$	$I_s$	$Y_{I_s}$	$P_w$	$Y_{P_w}$	$P_p$	$Y_{P_p}$	$P_c$	$Y_{P_c}$
1	[A1-M1]	5229	2.67	--	--	--	--	-8923	5.15	3693	8.66
2	[A2-M2]	5033	2.67	--	--	--	--	-9130	5.44	4097	8.86
3	[A1-M1]	6905	2.50	--	--	--	--	-12487	5.30	5583	8.76
4	[A2-M2]	6851	2.49	--	--	--	--	-13969	5.88	7118	9.14
5	[A1-M1] S	3994	2.67	466	2.67	--	--	-7539	5.09	3078	8.59
6	[A2-M2] S	5013	2.67	522	2.67	--	--	-10217	5.53	4683	8.92
7	[A1-M1] S	4216	2.63	492	2.67	--	--	-8044	5.12	3336	8.62
8	[A2-M2] S	5291	2.63	551	2.67	--	--	-11047	5.62	5206	8.97
9	[SLEQ]	4246	2.63	--	--	--	--	-7174	5.05	2928	8.55
10	[SLEF]	4581	2.59	--	--	--	--	-7857	5.08	3276	8.58
11	[SLER]	5140	2.52	--	--	--	--	-9064	5.18	3925	8.66
12	[SLEQ] S	4233	2.63	219	2.67	--	--	-7560	5.08	3108	8.58
13	[SLEF] S	4567	2.58	237	2.67	--	--	-8277	5.12	3474	8.61
14	[SLER] S	5124	2.52	265	2.67	--	--	-9551	5.21	4162	8.68

Simbologia adottata

$n^\circ$	Indice della Combinazione/Fase
Tipo	Tipo della Combinazione/Fase
$R_c$	Risultante carichi esterni applicati, espressa in [kg]
$R_t$	Risultante delle reazioni dei tiranti (componente orizzontale), espressa in [kg]
$R_v$	Risultante delle reazioni dei vincoli, espressa in [kg]
$R_p$	Risultante delle reazioni dei puntoni, espressa in [kg]

<b>n°</b>	<b>Tipo</b>	<b>Rc</b>	<b>Y<sub>Rc</sub></b>	<b>Rt</b>	<b>Y<sub>Rt</sub></b>	<b>Rv</b>	<b>Y<sub>Rv</sub></b>	<b>Rp</b>	<b>Y<sub>Rp</sub></b>
1	[A1-M1]	0	0.00	--	--	--	--	--	--
2	[A2-M2]	0	0.00	--	--	--	--	--	--
3	[A1-M1]	0	0.00	--	--	--	--	--	--
4	[A2-M2]	0	0.00	--	--	--	--	--	--
5	[A1-M1] S	0	0.00	--	--	--	--	--	--
6	[A2-M2] S	0	0.00	--	--	--	--	--	--
7	[A1-M1] S	0	0.00	--	--	--	--	--	--
8	[A2-M2] S	0	0.00	--	--	--	--	--	--
9	[SLEQ]	0	0.00	--	--	--	--	--	--
10	[SLEF]	0	0.00	--	--	--	--	--	--
11	[SLER]	0	0.00	--	--	--	--	--	--
12	[SLEQ] S	0	0.00	--	--	--	--	--	--
13	[SLEF] S	0	0.00	--	--	--	--	--	--
14	[SLER] S	0	0.00	--	--	--	--	--	--

*Simbologia adottata*

*n°* Indice della Combinazione/Fase

*Tipo* Tipo della Combinazione/Fase

*P<sub>NUL</sub>* Punto di nullo del diagramma, espresso in [m]

*P<sub>INV</sub>* Punto di inversione del diagramma, espresso in [m]

*C<sub>ROT</sub>* Punto Centro di rotazione, espresso in [m]

*MP* Percentuale molle plasticizzate, espressa in [%]

*R/R<sub>MAX</sub>* Rapporto tra lo sforzo reale nelle molle e lo sforzo che le molle sarebbero in grado di esplicare, espresso in [%]

*Pp* Portanza di punta, espressa in [kg]

<b>n°</b>	<b>Tipo</b>	<b>P<sub>NUL</sub></b>	<b>P<sub>INV</sub></b>	<b>C<sub>ROT</sub></b>	<b>MP</b>	<b>R/R<sub>MAX</sub></b>	<b>Pp</b>
1	[A1-M1]	4.00	4.40	7.11	11.80	1.52	67873
2	[A2-M2]	4.00	5.25	7.32	15.53	2.77	35802
3	[A1-M1]	4.00	5.25	7.22	15.53	1.89	67873
4	[A2-M2]	4.00	7.05	7.64	26.71	3.77	35802
5	[A1-M1] S	4.00	4.20	7.04	10.56	1.49	67873
6	[A2-M2] S	4.00	5.40	7.39	18.01	3.15	35802
7	[A1-M1] S	4.00	4.20	7.07	11.18	1.58	67873
8	[A2-M2] S	4.00	5.55	7.45	19.88	3.33	35802
9	[SLEQ]	4.00	4.20	6.98	10.56	1.38	67873
10	[SLEF]	4.00	4.20	7.02	11.18	1.46	67873
11	[SLER]	4.00	4.95	7.11	11.80	1.64	67873
12	[SLEQ] S	4.00	4.20	7.02	10.56	1.46	67873
13	[SLEF] S	4.00	4.20	7.06	11.18	1.57	67873
14	[SLER] S	4.00	5.00	7.14	12.42	1.73	67873

*Pressioni orizzontali agenti sulla paratia*

*Simbologia adottata*

*N° numero d'ordine della sezione*

*Y ordinata della sezione espressa in [m]*

*P pressione sulla paratia espressa in [kg/mq] positiva da monte verso valle*

**Combinazione n° 1**

<b>N°</b>	<b>Y</b>	<b>P</b>
1	0.00	0.00
2	0.05	32.69
3	0.10	65.37
4	0.15	98.06
5	0.20	130.75
6	0.25	163.44
7	0.30	196.13
8	0.35	228.82
9	0.40	261.50
10	0.45	294.19
11	0.50	326.88
12	0.55	359.57
13	0.60	392.25
14	0.65	424.94
15	0.70	457.63
16	0.75	490.32
17	0.80	523.01
18	0.85	555.69
19	0.90	588.38
20	0.95	621.07
21	1.00	653.76
22	1.05	686.45
23	1.10	719.13
24	1.15	751.82
25	1.20	784.51
26	1.25	817.20
27	1.30	849.89
28	1.35	882.57
29	1.40	915.26
30	1.45	947.95
31	1.50	980.64
32	1.55	1013.32
33	1.60	1046.01
34	1.65	1078.70
35	1.70	1111.39
36	1.75	1144.08
37	1.80	1176.76
38	1.85	1209.45
39	1.90	1242.14
40	1.95	1274.83
41	2.00	1307.52
42	2.05	1340.20
43	2.10	1372.89
44	2.15	1405.58

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45	2.20	1438.27
46	2.25	1470.95
47	2.30	1503.64
48	2.35	1536.33
49	2.40	1569.02
50	2.45	1601.71
51	2.50	1634.39
52	2.55	1667.08
53	2.60	1699.77
54	2.65	1732.46
55	2.70	1765.15
56	2.75	1797.83
57	2.80	1830.52
58	2.85	1863.21
59	2.90	1895.90
60	2.95	1928.59
61	3.00	1961.27
62	3.05	1993.96
63	3.10	2026.65
64	3.15	2059.34
65	3.20	2092.02
66	3.25	2124.71
67	3.30	2157.40
68	3.35	2190.09
69	3.40	2222.78
70	3.45	2255.46
71	3.50	2288.15
72	3.55	2320.84
73	3.60	2353.53
74	3.65	2386.22
75	3.70	2418.90
76	3.75	2451.59
77	3.80	2484.28
78	3.85	2515.33
79	3.90	2546.39
80	3.95	2574.99
1	4.00	-3338.97
2	4.05	-4866.87
3	4.10	-5042.40
4	4.15	-5150.97
5	4.20	-5259.54
6	4.25	-5373.09
7	4.30	-5486.64
8	4.35	-5599.43
9	4.40	-5712.22
10	4.45	-4668.13
11	4.50	-3624.04
12	4.55	-3180.76
13	4.60	-2737.49
14	4.65	-3425.81
15	4.70	-4114.12
16	4.75	-4185.41
17	4.80	-4256.70
18	4.85	-4944.14
19	4.90	-5631.58
20	4.95	-5457.00
21	5.00	-5223.87

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22	5.05	-4996.32
23	5.10	-4774.36
24	5.15	-4558.00
25	5.20	-4347.24
26	5.25	-4142.06
27	5.30	-3942.45
28	5.35	-3748.40
29	5.40	-3559.88
30	5.45	-3376.85
31	5.50	-3199.29
32	5.55	-3027.16
33	5.60	-2860.40
34	5.65	-2698.97
35	5.70	-2542.81
36	5.75	-2391.88
37	5.80	-2246.10
38	5.85	-2105.41
39	5.90	-1969.76
40	5.95	-1839.06
41	6.00	-1713.24
42	6.05	-1592.23
43	6.10	-1475.95
44	6.15	-1364.32
45	6.20	-1257.26
46	6.25	-1154.68
47	6.30	-1056.50
48	6.35	-962.63
49	6.40	-872.98
50	6.45	-787.46
51	6.50	-705.98
52	6.55	-628.44
53	6.60	-554.76
54	6.65	-484.83
55	6.70	-418.56
56	6.75	-355.86
57	6.80	-296.62
58	6.85	-240.75
59	6.90	-188.16
60	6.95	-138.74
61	7.00	-266.41
62	7.05	-233.71
63	7.10	-40.73
64	7.15	139.01
65	7.20	305.98
66	7.25	460.64
67	7.30	603.48
68	7.35	734.95
69	7.40	855.53
70	7.45	965.66
71	7.50	1065.80
72	7.55	1156.41
73	7.60	1237.91
74	7.65	1310.74
75	7.70	1375.32
76	7.75	1432.06
77	7.80	1481.38
78	7.85	1523.66

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79	7.90	1559.29
80	7.95	1588.64
81	8.00	1612.08
82	8.05	1629.97
83	8.10	1642.64
84	8.15	1650.42
85	8.20	1653.65
86	8.25	1652.62
87	8.30	1647.63
88	8.35	1638.98
89	8.40	1626.93
90	8.45	1611.75
91	8.50	1593.71
92	8.55	1573.03
93	8.60	1549.95
94	8.65	1524.70
95	8.70	1497.48
96	8.75	1468.49
97	8.80	1437.94
98	8.85	1405.99
99	8.90	1372.81
100	8.95	1338.58
101	9.00	1303.44
102	9.05	1267.53
103	9.10	1231.00
104	9.15	1193.96
105	9.20	1156.53
106	9.25	1118.83
107	9.30	1080.96
108	9.35	1043.00
109	9.40	1005.05
110	9.45	967.18
111	9.50	929.47
112	9.55	891.99
113	9.60	854.80
114	9.65	817.95
115	9.70	781.48
116	9.75	745.45
117	9.80	709.88
118	9.85	674.82
119	9.90	640.29
120	9.95	606.31
121	10.00	572.91
122	10.05	540.09
123	10.10	507.87
124	10.15	476.26
125	10.20	445.25
126	10.25	414.86
127	10.30	385.07
128	10.35	355.89
129	10.40	327.30
130	10.45	299.30
131	10.50	271.87
132	10.55	245.00
133	10.60	218.68
134	10.65	192.87
135	10.70	167.58

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136	10.75	142.76
137	10.80	118.41
138	10.85	94.51
139	10.90	71.01
140	10.95	47.91
141	11.00	25.18
142	11.05	2.80
143	11.10	-19.27
144	11.15	-41.05
145	11.20	-62.56
146	11.25	-83.82
147	11.30	-104.87
148	11.35	-125.72
149	11.40	-146.40
150	11.45	-166.93
151	11.50	-187.33
152	11.55	-207.62
153	11.60	-227.82
154	11.65	-247.95
155	11.70	-268.02
156	11.75	-288.04
157	11.80	-308.04
158	11.85	-328.02
159	11.90	-347.98
160	11.95	-367.94
161	12.00	-387.90

#### Combinazione n° 2

N°	Y	P
1	0.00	0.00
2	0.05	31.46
3	0.10	62.93
4	0.15	94.39
5	0.20	125.86
6	0.25	157.32
7	0.30	188.78
8	0.35	220.25
9	0.40	251.71
10	0.45	283.17
11	0.50	314.64
12	0.55	346.10
13	0.60	377.57
14	0.65	409.03
15	0.70	440.49
16	0.75	471.96
17	0.80	503.42
18	0.85	534.89
19	0.90	566.35
20	0.95	597.81
21	1.00	629.28
22	1.05	660.74
23	1.10	692.21
24	1.15	723.67
25	1.20	755.13
26	1.25	786.60
27	1.30	818.06

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28	1.35	849.52
29	1.40	880.99
30	1.45	912.45
31	1.50	943.92
32	1.55	975.38
33	1.60	1006.84
34	1.65	1038.31
35	1.70	1069.77
36	1.75	1101.24
37	1.80	1132.70
38	1.85	1164.16
39	1.90	1195.63
40	1.95	1227.09
41	2.00	1258.56
42	2.05	1290.02
43	2.10	1321.48
44	2.15	1352.95
45	2.20	1384.41
46	2.25	1415.87
47	2.30	1447.34
48	2.35	1478.80
49	2.40	1510.27
50	2.45	1541.73
51	2.50	1573.19
52	2.55	1604.66
53	2.60	1636.12
54	2.65	1667.59
55	2.70	1699.05
56	2.75	1730.51
57	2.80	1761.98
58	2.85	1793.44
59	2.90	1824.91
60	2.95	1856.37
61	3.00	1887.83
62	3.05	1919.30
63	3.10	1950.76
64	3.15	1982.22
65	3.20	2013.69
66	3.25	2045.15
67	3.30	2076.62
68	3.35	2108.08
69	3.40	2139.54
70	3.45	2171.01
71	3.50	2202.47
72	3.55	2233.94
73	3.60	2265.40
74	3.65	2296.86
75	3.70	2328.33
76	3.75	2359.79
77	3.80	2391.26
78	3.85	2421.15
79	3.90	2451.04
80	3.95	2478.57
1	4.00	-2348.00
2	4.05	-3761.82
3	4.10	-3889.85
4	4.15	-3588.51

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5	4.20	-3287.17
6	4.25	-2776.53
7	4.30	-2265.88
8	4.35	-2114.15
9	4.40	-1962.41
10	4.45	-2005.70
11	4.50	-2048.98
12	4.55	-2091.85
13	4.60	-2134.71
14	4.65	-2177.01
15	4.70	-2219.31
16	4.75	-2936.48
17	4.80	-3653.65
18	4.85	-4387.41
19	4.90	-5121.16
20	4.95	-5196.07
21	5.00	-5270.98
22	5.05	-5345.33
23	5.10	-5419.67
24	5.15	-5493.45
25	5.20	-5567.23
26	5.25	-5587.98
27	5.30	-5342.59
28	5.35	-5103.24
29	5.40	-4869.94
30	5.45	-4642.70
31	5.50	-4421.49
32	5.55	-4206.32
33	5.60	-3997.14
34	5.65	-3793.95
35	5.70	-3596.69
36	5.75	-3405.35
37	5.80	-3219.86
38	5.85	-3040.19
39	5.90	-2866.28
40	5.95	-2698.08
41	6.00	-2535.51
42	6.05	-2378.53
43	6.10	-2227.05
44	6.15	-2081.00
45	6.20	-1940.32
46	6.25	-1804.92
47	6.30	-1674.73
48	6.35	-1549.65
49	6.40	-1429.60
50	6.45	-1314.50
51	6.50	-1204.25
52	6.55	-1098.76
53	6.60	-997.94
54	6.65	-901.69
55	6.70	-809.92
56	6.75	-722.53
57	6.80	-639.42
58	6.85	-560.49
59	6.90	-485.63
60	6.95	-414.75
61	7.00	-1002.65

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62	7.05	-1356.13
63	7.10	-1072.20
64	7.15	-805.23
65	7.20	-554.71
66	7.25	-320.12
67	7.30	-100.94
68	7.35	103.36
69	7.40	293.30
70	7.45	469.41
71	7.50	632.21
72	7.55	782.23
73	7.60	919.98
74	7.65	1045.97
75	7.70	1160.71
76	7.75	1264.70
77	7.80	1358.42
78	7.85	1442.35
79	7.90	1516.98
80	7.95	1582.75
81	8.00	1640.14
82	8.05	1689.56
83	8.10	1731.47
84	8.15	1766.27
85	8.20	1794.37
86	8.25	1816.18
87	8.30	1832.07
88	8.35	1842.41
89	8.40	1847.56
90	8.45	1847.88
91	8.50	1843.69
92	8.55	1835.31
93	8.60	1823.06
94	8.65	1807.23
95	8.70	1788.10
96	8.75	1765.96
97	8.80	1741.05
98	8.85	1713.63
99	8.90	1683.93
100	8.95	1652.18
101	9.00	1618.59
102	9.05	1583.37
103	9.10	1546.70
104	9.15	1508.76
105	9.20	1469.74
106	9.25	1429.78
107	9.30	1389.03
108	9.35	1347.65
109	9.40	1305.75
110	9.45	1263.46
111	9.50	1220.90
112	9.55	1178.16
113	9.60	1135.35
114	9.65	1092.56
115	9.70	1049.86
116	9.75	1007.32
117	9.80	965.02
118	9.85	923.02

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119	9.90	881.36
120	9.95	840.10
121	10.00	799.27
122	10.05	758.91
123	10.10	719.05
124	10.15	679.72
125	10.20	640.93
126	10.25	602.70
127	10.30	565.04
128	10.35	527.95
129	10.40	491.45
130	10.45	455.53
131	10.50	420.18
132	10.55	385.41
133	10.60	351.19
134	10.65	317.52
135	10.70	284.38
136	10.75	251.76
137	10.80	219.63
138	10.85	187.98
139	10.90	156.79
140	10.95	126.02
141	11.00	95.66
142	11.05	65.69
143	11.10	36.06
144	11.15	6.77
145	11.20	-22.22
146	11.25	-50.93
147	11.30	-79.40
148	11.35	-107.64
149	11.40	-135.68
150	11.45	-163.55
151	11.50	-191.27
152	11.55	-218.86
153	11.60	-246.35
154	11.65	-273.75
155	11.70	-301.08
156	11.75	-328.37
157	11.80	-355.62
158	11.85	-382.84
159	11.90	-410.05
160	11.95	-437.26
161	12.00	-464.46

**Combinazione n° 3**

<b>N°</b>	<b>Y</b>	<b>P</b>
1	0.00	0.00
2	0.00	414.88
3	0.05	448.62
4	0.10	482.35
5	0.15	516.09
6	0.20	549.83
7	0.25	582.51
8	0.30	615.20
9	0.35	647.89
10	0.40	680.58

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11	0.45	713.27
12	0.50	745.95
13	0.55	778.64
14	0.60	811.33
15	0.65	844.02
16	0.70	876.71
17	0.75	909.39
18	0.80	942.08
19	0.85	974.77
20	0.90	1007.46
21	0.95	1040.15
22	1.00	1072.83
23	1.05	1105.52
24	1.10	1138.21
25	1.15	1170.90
26	1.20	1203.58
27	1.25	1236.27
28	1.30	1268.96
29	1.35	1301.65
30	1.40	1334.34
31	1.45	1367.02
32	1.50	1399.71
33	1.55	1432.40
34	1.60	1465.09
35	1.65	1497.78
36	1.70	1530.46
37	1.75	1563.15
38	1.80	1595.84
39	1.85	1628.53
40	1.90	1661.22
41	1.95	1693.90
42	2.00	1726.59
43	2.05	1759.28
44	2.10	1791.97
45	2.15	1824.65
46	2.20	1857.34
47	2.25	1890.03
48	2.30	1922.72
49	2.35	1955.41
50	2.40	1988.09
51	2.45	2020.78
52	2.50	2053.47
53	2.55	2086.16
54	2.60	2118.85
55	2.65	2151.53
56	2.70	2184.22
57	2.75	2216.91
58	2.80	2249.60
59	2.85	2282.28
60	2.90	2314.97
61	2.95	2347.66
62	3.00	2380.35
63	3.05	2413.04
64	3.10	2445.72
65	3.15	2478.41
66	3.20	2511.10
67	3.25	2543.79

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68	3.30	2576.48
69	3.35	2609.16
70	3.40	2641.85
71	3.45	2674.54
72	3.50	2707.23
73	3.55	2739.92
74	3.60	2772.60
75	3.65	2805.29
76	3.70	2837.98
77	3.75	2870.67
78	3.80	2903.35
79	3.85	2934.41
80	3.90	2965.46
81	3.95	2994.06
1	4.00	-3121.70
2	4.05	-4866.87
3	4.10	-5042.40
4	4.15	-5150.97
5	4.20	-5259.54
6	4.25	-5373.09
7	4.30	-5486.64
8	4.35	-5599.43
9	4.40	-5712.22
10	4.45	-5824.25
11	4.50	-5936.28
12	4.55	-6047.57
13	4.60	-6158.85
14	4.65	-6269.40
15	4.70	-6379.94
16	4.75	-4958.96
17	4.80	-3537.97
18	4.85	-3647.06
19	4.90	-3756.15
20	4.95	-5305.16
21	5.00	-6854.17
22	5.05	-6839.66
23	5.10	-6825.16
24	5.15	-6869.79
25	5.20	-6914.42
26	5.25	-6945.71
27	5.30	-6626.59
28	5.35	-6315.85
29	5.40	-6013.45
30	5.45	-5719.39
31	5.50	-5433.61
32	5.55	-5156.09
33	5.60	-4886.77
34	5.65	-4625.60
35	5.70	-4372.50
36	5.75	-4127.42
37	5.80	-3890.27
38	5.85	-3660.97
39	5.90	-3439.43
40	5.95	-3225.56
41	6.00	-3019.27
42	6.05	-2820.44
43	6.10	-2628.98

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44	6.15	-2444.76
45	6.20	-2267.68
46	6.25	-2097.62
47	6.30	-1934.46
48	6.35	-1778.07
49	6.40	-1628.32
50	6.45	-1485.09
51	6.50	-1348.25
52	6.55	-1217.65
53	6.60	-1093.17
54	6.65	-974.66
55	6.70	-861.99
56	6.75	-755.02
57	6.80	-653.60
58	6.85	-557.59
59	6.90	-466.85
60	6.95	-381.23
61	7.00	-866.69
62	7.05	-1071.44
63	7.10	-732.43
64	7.15	-415.04
65	7.20	-118.57
66	7.25	157.72
67	7.30	414.52
68	7.35	652.57
69	7.40	872.56
70	7.45	1075.22
71	7.50	1261.23
72	7.55	1431.31
73	7.60	1586.12
74	7.65	1726.36
75	7.70	1852.68
76	7.75	1965.74
77	7.80	2066.19
78	7.85	2154.65
79	7.90	2231.73
80	7.95	2298.05
81	8.00	2354.17
82	8.05	2400.68
83	8.10	2438.12
84	8.15	2467.04
85	8.20	2487.96
86	8.25	2501.37
87	8.30	2507.77
88	8.35	2507.64
89	8.40	2501.41
90	8.45	2489.54
91	8.50	2472.43
92	8.55	2450.50
93	8.60	2424.13
94	8.65	2393.69
95	8.70	2359.54
96	8.75	2322.01
97	8.80	2281.42
98	8.85	2238.08
99	8.90	2192.28
100	8.95	2144.30

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101	9.00	2094.40
102	9.05	2042.82
103	9.10	1989.79
104	9.15	1935.54
105	9.20	1880.26
106	9.25	1824.16
107	9.30	1767.40
108	9.35	1710.17
109	9.40	1652.60
110	9.45	1594.85
111	9.50	1537.04
112	9.55	1479.30
113	9.60	1421.74
114	9.65	1364.46
115	9.70	1307.56
116	9.75	1251.10
117	9.80	1195.17
118	9.85	1139.84
119	9.90	1085.15
120	9.95	1031.16
121	10.00	977.91
122	10.05	925.44
123	10.10	873.76
124	10.15	822.91
125	10.20	772.91
126	10.25	723.75
127	10.30	675.45
128	10.35	628.01
129	10.40	581.42
130	10.45	535.68
131	10.50	490.77
132	10.55	446.67
133	10.60	403.37
134	10.65	360.85
135	10.70	319.07
136	10.75	278.02
137	10.80	237.66
138	10.85	197.96
139	10.90	158.90
140	10.95	120.42
141	11.00	82.50
142	11.05	45.11
143	11.10	8.20
144	11.15	-28.26
145	11.20	-64.31
146	11.25	-99.98
147	11.30	-135.32
148	11.35	-170.36
149	11.40	-205.13
150	11.45	-239.67
151	11.50	-274.00
152	11.55	-308.17
153	11.60	-342.20
154	11.65	-376.11
155	11.70	-409.93
156	11.75	-443.69
157	11.80	-477.40

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158	11.85	-511.08
159	11.90	-544.74
160	11.95	-578.39
161	12.00	-612.04

**Combinazione n° 4**

<b>N°</b>	<b>Y</b>	<b>P</b>
1	0.00	0.00
2	0.00	449.93
3	0.05	482.53
4	0.10	515.13
5	0.15	547.73
6	0.20	580.33
7	0.25	611.80
8	0.30	643.26
9	0.35	674.73
10	0.40	706.19
11	0.45	737.65
12	0.50	769.12
13	0.55	800.58
14	0.60	832.04
15	0.65	863.51
16	0.70	894.97
17	0.75	926.44
18	0.80	957.90
19	0.85	989.36
20	0.90	1020.83
21	0.95	1052.29
22	1.00	1083.76
23	1.05	1115.22
24	1.10	1146.68
25	1.15	1178.15
26	1.20	1209.61
27	1.25	1241.08
28	1.30	1272.54
29	1.35	1304.00
30	1.40	1335.47
31	1.45	1366.93
32	1.50	1398.39
33	1.55	1429.86
34	1.60	1461.32
35	1.65	1492.79
36	1.70	1524.25
37	1.75	1555.71
38	1.80	1587.18
39	1.85	1618.64
40	1.90	1650.11
41	1.95	1681.57
42	2.00	1713.03
43	2.05	1744.50
44	2.10	1775.96
45	2.15	1807.43
46	2.20	1838.89
47	2.25	1870.35
48	2.30	1901.82
49	2.35	1933.28

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50	2.40	1964.74
51	2.45	1996.21
52	2.50	2027.67
53	2.55	2059.14
54	2.60	2090.60
55	2.65	2122.06
56	2.70	2153.53
57	2.75	2184.99
58	2.80	2216.46
59	2.85	2247.92
60	2.90	2279.38
61	2.95	2310.85
62	3.00	2342.31
63	3.05	2373.78
64	3.10	2405.24
65	3.15	2436.70
66	3.20	2468.17
67	3.25	2499.63
68	3.30	2531.09
69	3.35	2562.56
70	3.40	2594.02
71	3.45	2625.49
72	3.50	2656.95
73	3.55	2688.41
74	3.60	2719.88
75	3.65	2751.34
76	3.70	2782.81
77	3.75	2814.27
78	3.80	2845.73
79	3.85	2875.62
80	3.90	2905.51
81	3.95	2933.05
1	4.00	-2115.26
2	4.05	-3761.82
3	4.10	-3889.85
4	4.15	-3965.29
5	4.20	-4040.74
6	4.25	-4119.62
7	4.30	-4198.50
8	4.35	-3058.02
9	4.40	-1917.55
10	4.45	-1275.28
11	4.50	-633.01
12	4.55	-1192.20
13	4.60	-1751.39
14	4.65	-1794.09
15	4.70	-1836.78
16	4.75	-2649.59
17	4.80	-3462.39
18	4.85	-4230.06
19	4.90	-4997.74
20	4.95	-4981.37
21	5.00	-4965.00
22	5.05	-4980.88
23	5.10	-4996.76
24	5.15	-5013.27
25	5.20	-5029.79

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26	5.25	-5046.70
27	5.30	-5063.62
28	5.35	-5081.79
29	5.40	-5099.96
30	5.45	-5118.22
31	5.50	-5136.49
32	5.55	-5153.69
33	5.60	-5170.90
34	5.65	-5189.04
35	5.70	-5207.18
36	5.75	-5225.15
37	5.80	-5243.11
38	5.85	-5260.84
39	5.90	-5278.56
40	5.95	-5297.06
41	6.00	-5315.55
42	6.05	-5332.66
43	6.10	-5349.78
44	6.15	-5366.46
45	6.20	-5065.26
46	6.25	-4773.46
47	6.30	-4490.96
48	6.35	-4217.70
49	6.40	-3953.60
50	6.45	-3698.55
51	6.50	-3452.46
52	6.55	-3215.23
53	6.60	-2986.76
54	6.65	-2766.93
55	6.70	-2555.63
56	6.75	-2352.74
57	6.80	-2158.13
58	6.85	-1971.68
59	6.90	-1793.25
60	6.95	-1622.73
61	7.00	-4209.46
62	7.05	-6219.48
63	7.10	-5515.65
64	7.15	-4846.76
65	7.20	-4212.04
66	7.25	-3610.70
67	7.30	-3041.91
68	7.35	-2504.83
69	7.40	-1998.60
70	7.45	-1522.33
71	7.50	-1075.11
72	7.55	-656.05
73	7.60	-264.24
74	7.65	101.26
75	7.70	441.36
76	7.75	756.98
77	7.80	1049.05
78	7.85	1318.46
79	7.90	1566.13
80	7.95	1792.95
81	8.00	1999.82
82	8.05	2187.60

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83	8.10	2357.15
84	8.15	2509.33
85	8.20	2644.95
86	8.25	2764.84
87	8.30	2869.78
88	8.35	2960.56
89	8.40	3037.93
90	8.45	3102.63
91	8.50	3155.37
92	8.55	3196.86
93	8.60	3227.76
94	8.65	3248.73
95	8.70	3260.39
96	8.75	3263.37
97	8.80	3258.24
98	8.85	3245.56
99	8.90	3225.89
100	8.95	3199.75
101	9.00	3167.63
102	9.05	3130.01
103	9.10	3087.34
104	9.15	3040.07
105	9.20	2988.60
106	9.25	2933.34
107	9.30	2874.65
108	9.35	2812.88
109	9.40	2748.38
110	9.45	2681.46
111	9.50	2612.41
112	9.55	2541.52
113	9.60	2469.04
114	9.65	2395.21
115	9.70	2320.28
116	9.75	2244.44
117	9.80	2167.89
118	9.85	2090.82
119	9.90	2013.38
120	9.95	1935.73
121	10.00	1858.01
122	10.05	1780.35
123	10.10	1702.85
124	10.15	1625.61
125	10.20	1548.73
126	10.25	1472.28
127	10.30	1396.33
128	10.35	1320.93
129	10.40	1246.14
130	10.45	1172.00
131	10.50	1098.53
132	10.55	1025.75
133	10.60	953.69
134	10.65	882.35
135	10.70	811.73
136	10.75	741.83
137	10.80	672.64
138	10.85	604.14
139	10.90	536.32

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140	10.95	469.15
141	11.00	402.61
142	11.05	336.66
143	11.10	271.28
144	11.15	206.42
145	11.20	142.06
146	11.25	78.15
147	11.30	14.65
148	11.35	-48.47
149	11.40	-111.25
150	11.45	-173.75
151	11.50	-235.98
152	11.55	-298.00
153	11.60	-359.83
154	11.65	-421.51
155	11.70	-483.07
156	11.75	-544.55
157	11.80	-605.96
158	11.85	-667.33
159	11.90	-728.67
160	11.95	-790.00
161	12.00	-851.33

**Combinazione n° 5**

<b>N°</b>	<b>Y</b>	<b>P</b>
1	0.00	0.00
2	0.05	27.88
3	0.10	55.76
4	0.15	83.65
5	0.20	111.53
6	0.25	139.41
7	0.30	167.30
8	0.35	195.18
9	0.40	223.06
10	0.45	250.95
11	0.50	278.83
12	0.55	306.71
13	0.60	334.59
14	0.65	362.48
15	0.70	390.36
16	0.75	418.24
17	0.80	446.13
18	0.85	474.01
19	0.90	501.89
20	0.95	529.77
21	1.00	557.66
22	1.05	585.54
23	1.10	613.42
24	1.15	641.31
25	1.20	669.19
26	1.25	697.07
27	1.30	724.95
28	1.35	752.84
29	1.40	780.72
30	1.45	808.60
31	1.50	836.49

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32	1.55	864.37
33	1.60	892.25
34	1.65	920.13
35	1.70	948.02
36	1.75	975.90
37	1.80	1003.78
38	1.85	1031.67
39	1.90	1059.55
40	1.95	1087.43
41	2.00	1115.31
42	2.05	1143.20
43	2.10	1171.08
44	2.15	1198.96
45	2.20	1226.85
46	2.25	1254.73
47	2.30	1282.61
48	2.35	1310.49
49	2.40	1338.38
50	2.45	1366.26
51	2.50	1394.14
52	2.55	1422.03
53	2.60	1449.91
54	2.65	1477.79
55	2.70	1505.67
56	2.75	1533.56
57	2.80	1561.44
58	2.85	1589.32
59	2.90	1617.21
60	2.95	1645.09
61	3.00	1672.97
62	3.05	1700.85
63	3.10	1728.74
64	3.15	1756.62
65	3.20	1784.50
66	3.25	1812.39
67	3.30	1840.27
68	3.35	1868.15
69	3.40	1896.03
70	3.45	1923.92
71	3.50	1951.80
72	3.55	1979.68
73	3.60	2007.56
74	3.65	2035.45
75	3.70	2063.33
76	3.75	2091.21
77	3.80	2119.10
78	3.85	2145.72
79	3.90	2172.35
80	3.95	2197.09
1	4.00	-3414.56
2	4.05	-4834.43
3	4.10	-4986.86
4	4.15	-5070.58
5	4.20	-5154.30
6	4.25	-4520.93
7	4.30	-3887.57
8	4.35	-3568.98

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9	4.40	-3250.40
10	4.45	-3636.25
11	4.50	-4022.11
12	4.55	-4080.91
13	4.60	-4139.72
14	4.65	-4202.81
15	4.70	-4265.89
16	4.75	-4328.47
17	4.80	-4391.05
18	4.85	-4677.28
19	4.90	-4479.78
20	4.95	-4286.93
21	5.00	-4098.75
22	5.05	-3915.25
23	5.10	-3736.42
24	5.15	-3562.27
25	5.20	-3392.78
26	5.25	-3227.94
27	5.30	-3067.73
28	5.35	-2912.14
29	5.40	-2761.12
30	5.45	-2614.66
31	5.50	-2472.72
32	5.55	-2335.25
33	5.60	-2202.22
34	5.65	-2073.57
35	5.70	-1949.27
36	5.75	-1829.25
37	5.80	-1713.47
38	5.85	-1601.86
39	5.90	-1494.37
40	5.95	-1390.93
41	6.00	-1291.49
42	6.05	-1195.96
43	6.10	-1104.30
44	6.15	-1016.42
45	6.20	-932.26
46	6.25	-851.73
47	6.30	-774.78
48	6.35	-701.32
49	6.40	-631.28
50	6.45	-564.59
51	6.50	-501.15
52	6.55	-440.90
53	6.60	-383.75
54	6.65	-329.62
55	6.70	-278.44
56	6.75	-230.12
57	6.80	-184.58
58	6.85	-141.73
59	6.90	-101.51
60	6.95	-63.81
61	7.00	-82.38
62	7.05	20.51
63	7.10	166.32
64	7.15	301.62
65	7.20	426.82

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66	7.25	542.30
67	7.30	648.46
68	7.35	745.67
69	7.40	834.33
70	7.45	914.79
71	7.50	987.45
72	7.55	1052.64
73	7.60	1110.75
74	7.65	1162.10
75	7.70	1207.05
76	7.75	1245.93
77	7.80	1279.07
78	7.85	1306.78
79	7.90	1329.38
80	7.95	1347.16
81	8.00	1360.41
82	8.05	1369.42
83	8.10	1374.47
84	8.15	1375.80
85	8.20	1373.69
86	8.25	1368.37
87	8.30	1360.08
88	8.35	1349.05
89	8.40	1335.50
90	8.45	1319.62
91	8.50	1301.63
92	8.55	1281.72
93	8.60	1260.06
94	8.65	1236.83
95	8.70	1212.19
96	8.75	1186.30
97	8.80	1159.31
98	8.85	1131.36
99	8.90	1102.57
100	8.95	1073.09
101	9.00	1043.01
102	9.05	1012.46
103	9.10	981.53
104	9.15	950.32
105	9.20	918.92
106	9.25	887.42
107	9.30	855.88
108	9.35	824.39
109	9.40	793.00
110	9.45	761.78
111	9.50	730.78
112	9.55	700.05
113	9.60	669.63
114	9.65	639.56
115	9.70	609.88
116	9.75	580.61
117	9.80	551.79
118	9.85	523.44
119	9.90	495.57
120	9.95	468.20
121	10.00	441.34
122	10.05	415.00

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123	10.10	389.19
124	10.15	363.91
125	10.20	339.15
126	10.25	314.93
127	10.30	291.23
128	10.35	268.04
129	10.40	245.36
130	10.45	223.17
131	10.50	201.48
132	10.55	180.25
133	10.60	159.48
134	10.65	139.15
135	10.70	119.24
136	10.75	99.74
137	10.80	80.62
138	10.85	61.87
139	10.90	43.47
140	10.95	25.39
141	11.00	7.61
142	11.05	-9.88
143	11.10	-27.11
144	11.15	-44.09
145	11.20	-60.86
146	11.25	-77.43
147	11.30	-93.81
148	11.35	-110.04
149	11.40	-126.13
150	11.45	-142.09
151	11.50	-157.95
152	11.55	-173.72
153	11.60	-189.42
154	11.65	-205.05
155	11.70	-220.64
156	11.75	-236.20
157	11.80	-251.73
158	11.85	-267.25
159	11.90	-282.75
160	11.95	-298.25
161	12.00	-313.75

**Combinazione n° 6**

<b>N°</b>	<b>Y</b>	<b>P</b>
1	0.00	0.00
2	0.05	34.59
3	0.10	69.19
4	0.15	103.78
5	0.20	138.38
6	0.25	172.97
7	0.30	207.56
8	0.35	242.16
9	0.40	276.75
10	0.45	311.35
11	0.50	345.94
12	0.55	380.53
13	0.60	415.13
14	0.65	449.72

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15	0.70	484.32
16	0.75	518.91
17	0.80	553.50
18	0.85	588.10
19	0.90	622.69
20	0.95	657.29
21	1.00	691.88
22	1.05	726.47
23	1.10	761.07
24	1.15	795.66
25	1.20	830.26
26	1.25	864.85
27	1.30	899.45
28	1.35	934.04
29	1.40	968.63
30	1.45	1003.23
31	1.50	1037.82
32	1.55	1072.42
33	1.60	1107.01
34	1.65	1141.60
35	1.70	1176.20
36	1.75	1210.79
37	1.80	1245.39
38	1.85	1279.98
39	1.90	1314.57
40	1.95	1349.17
41	2.00	1383.76
42	2.05	1418.36
43	2.10	1452.95
44	2.15	1487.54
45	2.20	1522.14
46	2.25	1556.73
47	2.30	1591.33
48	2.35	1625.92
49	2.40	1660.51
50	2.45	1695.11
51	2.50	1729.70
52	2.55	1764.30
53	2.60	1798.89
54	2.65	1833.48
55	2.70	1868.08
56	2.75	1902.67
57	2.80	1937.27
58	2.85	1971.86
59	2.90	2006.45
60	2.95	2041.05
61	3.00	2075.64
62	3.05	2110.24
63	3.10	2144.83
64	3.15	2179.42
65	3.20	2214.02
66	3.25	2248.61
67	3.30	2283.21
68	3.35	2317.80
69	3.40	2352.40
70	3.45	2386.99
71	3.50	2421.58

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72	3.55	2456.18
73	3.60	2490.77
74	3.65	2525.37
75	3.70	2559.96
76	3.75	2594.55
77	3.80	2629.15
78	3.85	2662.17
79	3.90	2695.19
80	3.95	2725.85
1	4.00	-2091.52
2	4.05	-3761.82
3	4.10	-3889.85
4	4.15	-3588.51
5	4.20	-3287.17
6	4.25	-2776.53
7	4.30	-2265.88
8	4.35	-2114.15
9	4.40	-1962.41
10	4.45	-2005.70
11	4.50	-2048.98
12	4.55	-2091.85
13	4.60	-2134.71
14	4.65	-2177.01
15	4.70	-2219.31
16	4.75	-2936.48
17	4.80	-3653.65
18	4.85	-4387.41
19	4.90	-5121.16
20	4.95	-5196.07
21	5.00	-5270.98
22	5.05	-5345.33
23	5.10	-5419.67
24	5.15	-5493.45
25	5.20	-5567.23
26	5.25	-5634.62
27	5.30	-5702.01
28	5.35	-5742.01
29	5.40	-5782.01
30	5.45	-5627.50
31	5.50	-5367.04
32	5.55	-5113.40
33	5.60	-4866.57
34	5.65	-4626.55
35	5.70	-4393.28
36	5.75	-4166.75
37	5.80	-3946.92
38	5.85	-3733.74
39	5.90	-3527.15
40	5.95	-3327.11
41	6.00	-3133.54
42	6.05	-2946.39
43	6.10	-2765.58
44	6.15	-2591.05
45	6.20	-2422.70
46	6.25	-2260.46
47	6.30	-2104.25
48	6.35	-1953.97

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49	6.40	-1809.53
50	6.45	-1670.84
51	6.50	-1537.80
52	6.55	-1410.31
53	6.60	-1288.27
54	6.65	-1171.57
55	6.70	-1060.11
56	6.75	-953.79
57	6.80	-852.49
58	6.85	-756.10
59	6.90	-664.52
60	6.95	-577.62
61	7.00	-1428.09
62	7.05	-1989.77
63	7.10	-1639.38
64	7.15	-1309.15
65	7.20	-998.48
66	7.25	-706.79
67	7.30	-433.50
68	7.35	-178.00
69	7.40	60.31
70	7.45	282.04
71	7.50	487.77
72	7.55	678.12
73	7.60	853.68
74	7.65	1015.05
75	7.70	1162.80
76	7.75	1297.53
77	7.80	1419.79
78	7.85	1530.16
79	7.90	1629.19
80	7.95	1717.42
81	8.00	1795.38
82	8.05	1863.60
83	8.10	1922.58
84	8.15	1972.81
85	8.20	2014.80
86	8.25	2048.99
87	8.30	2075.85
88	8.35	2095.82
89	8.40	2109.33
90	8.45	2116.79
91	8.50	2118.60
92	8.55	2115.16
93	8.60	2106.82
94	8.65	2093.95
95	8.70	2076.88
96	8.75	2055.96
97	8.80	2031.49
98	8.85	2003.77
99	8.90	1973.09
100	8.95	1939.72
101	9.00	1903.93
102	9.05	1865.96
103	9.10	1826.05
104	9.15	1784.41
105	9.20	1741.26

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106	9.25	1696.80
107	9.30	1651.20
108	9.35	1604.65
109	9.40	1557.30
110	9.45	1509.31
111	9.50	1460.82
112	9.55	1411.96
113	9.60	1362.85
114	9.65	1313.61
115	9.70	1264.34
116	9.75	1215.12
117	9.80	1166.06
118	9.85	1117.22
119	9.90	1068.67
120	9.95	1020.47
121	10.00	972.69
122	10.05	925.36
123	10.10	878.53
124	10.15	832.23
125	10.20	786.50
126	10.25	741.35
127	10.30	696.80
128	10.35	652.87
129	10.40	609.56
130	10.45	566.88
131	10.50	524.83
132	10.55	483.40
133	10.60	442.58
134	10.65	402.37
135	10.70	362.76
136	10.75	323.71
137	10.80	285.22
138	10.85	247.27
139	10.90	209.82
140	10.95	172.86
141	11.00	136.36
142	11.05	100.30
143	11.10	64.63
144	11.15	29.34
145	11.20	-5.60
146	11.25	-40.23
147	11.30	-74.58
148	11.35	-108.66
149	11.40	-142.52
150	11.45	-176.19
151	11.50	-209.68
152	11.55	-243.02
153	11.60	-276.24
154	11.65	-309.37
155	11.70	-342.41
156	11.75	-375.40
157	11.80	-408.35
158	11.85	-441.27
159	11.90	-474.17
160	11.95	-507.07
161	12.00	-539.96

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**Combinazione n° 7**

<b>N°</b>	<b>Y</b>	<b>P</b>
1	0.00	0.00
2	0.00	55.32
3	0.05	83.49
4	0.10	111.67
5	0.15	139.84
6	0.20	168.02
7	0.25	196.05
8	0.30	224.09
9	0.35	252.12
10	0.40	280.16
11	0.45	308.19
12	0.50	336.23
13	0.55	364.26
14	0.60	392.30
15	0.65	420.33
16	0.70	448.37
17	0.75	476.40
18	0.80	504.44
19	0.85	532.47
20	0.90	560.51
21	0.95	588.54
22	1.00	616.58
23	1.05	644.61
24	1.10	672.65
25	1.15	700.69
26	1.20	728.72
27	1.25	756.76
28	1.30	784.79
29	1.35	812.83
30	1.40	840.86
31	1.45	868.90
32	1.50	896.93
33	1.55	924.97
34	1.60	953.00
35	1.65	981.04
36	1.70	1009.07
37	1.75	1037.11
38	1.80	1065.14
39	1.85	1093.18
40	1.90	1121.21
41	1.95	1149.25
42	2.00	1177.28
43	2.05	1205.32
44	2.10	1233.35
45	2.15	1261.39
46	2.20	1289.42
47	2.25	1317.46
48	2.30	1345.49
49	2.35	1373.53
50	2.40	1401.56
51	2.45	1429.60
52	2.50	1457.63
53	2.55	1485.67
54	2.60	1513.70



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55	2.65	1541.74
56	2.70	1569.77
57	2.75	1597.81
58	2.80	1625.85
59	2.85	1653.88
60	2.90	1681.92
61	2.95	1709.95
62	3.00	1737.99
63	3.05	1766.02
64	3.10	1794.06
65	3.15	1822.09
66	3.20	1850.13
67	3.25	1878.16
68	3.30	1906.20
69	3.35	1934.23
70	3.40	1962.27
71	3.45	1990.30
72	3.50	2018.34
73	3.55	2046.37
74	3.60	2074.41
75	3.65	2102.44
76	3.70	2130.48
77	3.75	2158.51
78	3.80	2186.55
79	3.85	2213.33
80	3.90	2240.10
81	3.95	2265.00
1	4.00	-3372.95
2	4.05	-4834.43
3	4.10	-4986.86
4	4.15	-5070.58
5	4.20	-5154.30
6	4.25	-4721.55
7	4.30	-4288.80
8	4.35	-3957.19
9	4.40	-3625.59
10	4.45	-3800.91
11	4.50	-3976.23
12	4.55	-4038.08
13	4.60	-4099.93
14	4.65	-4162.98
15	4.70	-4226.02
16	4.75	-4288.60
17	4.80	-4351.18
18	4.85	-4890.94
19	4.90	-4949.23
20	4.95	-4738.05
21	5.00	-4531.93
22	5.05	-4330.86
23	5.10	-4134.85
24	5.15	-3943.91
25	5.20	-3758.02
26	5.25	-3577.18
27	5.30	-3401.37
28	5.35	-3230.56
29	5.40	-3064.73
30	5.45	-2903.84

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31	5.50	-2747.86
32	5.55	-2596.75
33	5.60	-2450.47
34	5.65	-2308.96
35	5.70	-2172.17
36	5.75	-2040.06
37	5.80	-1912.55
38	5.85	-1789.60
39	5.90	-1671.14
40	5.95	-1557.09
41	6.00	-1447.41
42	6.05	-1342.00
43	6.10	-1240.81
44	6.15	-1143.75
45	6.20	-1050.75
46	6.25	-961.73
47	6.30	-876.62
48	6.35	-795.32
49	6.40	-717.77
50	6.45	-643.88
51	6.50	-573.55
52	6.55	-506.72
53	6.60	-443.28
54	6.65	-383.16
55	6.70	-326.27
56	6.75	-272.52
57	6.80	-221.82
58	6.85	-174.08
59	6.90	-129.22
60	6.95	-87.15
61	7.00	-137.73
62	7.05	-52.41
63	7.10	110.87
64	7.15	262.58
65	7.20	403.15
66	7.25	533.00
67	7.30	652.55
68	7.35	762.23
69	7.40	862.44
70	7.45	953.60
71	7.50	1036.11
72	7.55	1110.37
73	7.60	1176.77
74	7.65	1235.68
75	7.70	1287.49
76	7.75	1332.56
77	7.80	1371.25
78	7.85	1403.90
79	7.90	1430.86
80	7.95	1452.45
81	8.00	1469.00
82	8.05	1480.81
83	8.10	1488.19
84	8.15	1491.43
85	8.20	1490.80
86	8.25	1486.58
87	8.30	1479.03

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88	8.35	1468.39
89	8.40	1454.91
90	8.45	1438.83
91	8.50	1420.34
92	8.55	1399.68
93	8.60	1377.04
94	8.65	1352.62
95	8.70	1326.58
96	8.75	1299.12
97	8.80	1270.38
98	8.85	1240.54
99	8.90	1209.73
100	8.95	1178.09
101	9.00	1145.76
102	9.05	1112.86
103	9.10	1079.49
104	9.15	1045.77
105	9.20	1011.81
106	9.25	977.68
107	9.30	943.48
108	9.35	909.29
109	9.40	875.18
110	9.45	841.22
111	9.50	807.46
112	9.55	773.97
113	9.60	740.79
114	9.65	707.97
115	9.70	675.54
116	9.75	643.55
117	9.80	612.02
118	9.85	580.98
119	9.90	550.45
120	9.95	520.45
121	10.00	490.99
122	10.05	462.09
123	10.10	433.74
124	10.15	405.97
125	10.20	378.75
126	10.25	352.11
127	10.30	326.02
128	10.35	300.49
129	10.40	275.51
130	10.45	251.06
131	10.50	227.13
132	10.55	203.71
133	10.60	180.79
134	10.65	158.34
135	10.70	136.35
136	10.75	114.80
137	10.80	93.67
138	10.85	72.93
139	10.90	52.57
140	10.95	32.57
141	11.00	12.89
142	11.05	-6.47
143	11.10	-25.56
144	11.15	-44.38

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145	11.20	-62.95
146	11.25	-81.32
147	11.30	-99.48
148	11.35	-117.47
149	11.40	-135.31
150	11.45	-153.01
151	11.50	-170.60
152	11.55	-188.09
153	11.60	-205.51
154	11.65	-222.85
155	11.70	-240.15
156	11.75	-257.41
157	11.80	-274.64
158	11.85	-291.85
159	11.90	-309.06
160	11.95	-326.25
161	12.00	-343.45

**Combinazione n° 8**

<b>N°</b>	<b>Y</b>	<b>P</b>
1	0.00	0.00
2	0.00	69.22
3	0.05	104.16
4	0.10	139.10
5	0.15	174.05
6	0.20	208.99
7	0.25	243.76
8	0.30	278.53
9	0.35	313.30
10	0.40	348.06
11	0.45	382.83
12	0.50	417.60
13	0.55	452.37
14	0.60	487.14
15	0.65	521.91
16	0.70	556.67
17	0.75	591.44
18	0.80	626.21
19	0.85	660.98
20	0.90	695.75
21	0.95	730.51
22	1.00	765.28
23	1.05	800.05
24	1.10	834.82
25	1.15	869.59
26	1.20	904.36
27	1.25	939.12
28	1.30	973.89
29	1.35	1008.66
30	1.40	1043.43
31	1.45	1078.20
32	1.50	1112.96
33	1.55	1147.73
34	1.60	1182.50
35	1.65	1217.27
36	1.70	1252.04

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37	1.75	1286.80
38	1.80	1321.57
39	1.85	1356.34
40	1.90	1391.11
41	1.95	1425.88
42	2.00	1460.65
43	2.05	1495.41
44	2.10	1530.18
45	2.15	1564.95
46	2.20	1599.72
47	2.25	1634.49
48	2.30	1669.25
49	2.35	1704.02
50	2.40	1738.79
51	2.45	1773.56
52	2.50	1808.33
53	2.55	1843.10
54	2.60	1877.86
55	2.65	1912.63
56	2.70	1947.40
57	2.75	1982.17
58	2.80	2016.94
59	2.85	2051.70
60	2.90	2086.47
61	2.95	2121.24
62	3.00	2156.01
63	3.05	2190.78
64	3.10	2225.54
65	3.15	2260.31
66	3.20	2295.08
67	3.25	2329.85
68	3.30	2364.62
69	3.35	2399.39
70	3.40	2434.15
71	3.45	2468.92
72	3.50	2503.69
73	3.55	2538.46
74	3.60	2573.23
75	3.65	2607.99
76	3.70	2642.76
77	3.75	2677.53
78	3.80	2712.30
79	3.85	2745.49
80	3.90	2778.69
81	3.95	2809.52
1	4.00	-2041.45
2	4.05	-3761.82
3	4.10	-3889.85
4	4.15	-3965.29
5	4.20	-4040.74
6	4.25	-2925.87
7	4.30	-1810.99
8	4.35	-1267.31
9	4.40	-723.63
10	4.45	-1356.43
11	4.50	-1989.23
12	4.55	-2032.54

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13	4.60	-2075.86
14	4.65	-2118.16
15	4.70	-2160.46
16	4.75	-2892.34
17	4.80	-3624.23
18	4.85	-4372.69
19	4.90	-5121.16
20	4.95	-5196.07
21	5.00	-5270.98
22	5.05	-5345.33
23	5.10	-5419.67
24	5.15	-5488.98
25	5.20	-5558.28
26	5.25	-5599.71
27	5.30	-5641.15
28	5.35	-5659.53
29	5.40	-5677.90
30	5.45	-5696.35
31	5.50	-5714.80
32	5.55	-5734.02
33	5.60	-5728.19
34	5.65	-5453.52
35	5.70	-5186.32
36	5.75	-4926.56
37	5.80	-4674.20
38	5.85	-4429.21
39	5.90	-4191.55
40	5.95	-3961.16
41	6.00	-3737.97
42	6.05	-3521.94
43	6.10	-3312.99
44	6.15	-3111.05
45	6.20	-2916.03
46	6.25	-2727.86
47	6.30	-2546.44
48	6.35	-2371.69
49	6.40	-2203.52
50	6.45	-2041.82
51	6.50	-1886.49
52	6.55	-1737.43
53	6.60	-1594.54
54	6.65	-1457.70
55	6.70	-1326.80
56	6.75	-1201.74
57	6.80	-1082.38
58	6.85	-968.63
59	6.90	-860.35
60	6.95	-757.43
61	7.00	-1902.24
62	7.05	-2703.51
63	7.10	-2286.08
64	7.15	-1891.83
65	7.20	-1520.12
66	7.25	-1170.32
67	7.30	-841.76
68	7.35	-533.80
69	7.40	-245.77

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70	7.45	23.01
71	7.50	273.20
72	7.55	505.47
73	7.60	720.49
74	7.65	918.92
75	7.70	1101.44
76	7.75	1268.68
77	7.80	1421.30
78	7.85	1559.94
79	7.90	1685.22
80	7.95	1797.76
81	8.00	1898.17
82	8.05	1987.04
83	8.10	2064.96
84	8.15	2132.49
85	8.20	2190.19
86	8.25	2238.60
87	8.30	2278.24
88	8.35	2309.62
89	8.40	2333.24
90	8.45	2349.58
91	8.50	2359.10
92	8.55	2362.25
93	8.60	2359.45
94	8.65	2351.13
95	8.70	2337.69
96	8.75	2319.50
97	8.80	2296.95
98	8.85	2270.37
99	8.90	2240.11
100	8.95	2206.48
101	9.00	2169.80
102	9.05	2130.36
103	9.10	2088.43
104	9.15	2044.28
105	9.20	1998.14
106	9.25	1950.27
107	9.30	1900.88
108	9.35	1850.18
109	9.40	1798.36
110	9.45	1745.60
111	9.50	1692.08
112	9.55	1637.96
113	9.60	1583.37
114	9.65	1528.47
115	9.70	1473.37
116	9.75	1418.19
117	9.80	1363.04
118	9.85	1308.00
119	9.90	1253.17
120	9.95	1198.63
121	10.00	1144.44
122	10.05	1090.66
123	10.10	1037.35
124	10.15	984.56
125	10.20	932.32
126	10.25	880.66

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127	10.30	829.62
128	10.35	779.21
129	10.40	729.44
130	10.45	680.33
131	10.50	631.88
132	10.55	584.09
133	10.60	536.95
134	10.65	490.46
135	10.70	444.61
136	10.75	399.37
137	10.80	354.74
138	10.85	310.68
139	10.90	267.18
140	10.95	224.21
141	11.00	181.74
142	11.05	139.74
143	11.10	98.19
144	11.15	57.06
145	11.20	16.30
146	11.25	-24.11
147	11.30	-64.20
148	11.35	-104.01
149	11.40	-143.57
150	11.45	-182.90
151	11.50	-222.04
152	11.55	-261.02
153	11.60	-299.87
154	11.65	-338.60
155	11.70	-377.25
156	11.75	-415.83
157	11.80	-454.37
158	11.85	-492.88
159	11.90	-531.36
160	11.95	-569.84
161	12.00	-608.32

**Combinazione n° 9**

<b>N°</b>	<b>Y</b>	<b>P</b>
1	0.00	0.00
2	0.00	55.32
3	0.05	80.60
4	0.10	105.89
5	0.15	131.17
6	0.20	156.45
7	0.25	181.60
8	0.30	206.74
9	0.35	231.89
10	0.40	257.03
11	0.45	282.18
12	0.50	307.32
13	0.55	332.47
14	0.60	357.61
15	0.65	382.76
16	0.70	407.90
17	0.75	433.04
18	0.80	458.19



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19	0.85	483.33
20	0.90	508.48
21	0.95	533.62
22	1.00	558.77
23	1.05	583.91
24	1.10	609.06
25	1.15	634.20
26	1.20	659.35
27	1.25	684.49
28	1.30	709.63
29	1.35	734.78
30	1.40	759.92
31	1.45	785.07
32	1.50	810.21
33	1.55	835.36
34	1.60	860.50
35	1.65	885.65
36	1.70	910.79
37	1.75	935.94
38	1.80	961.08
39	1.85	986.22
40	1.90	1011.37
41	1.95	1036.51
42	2.00	1061.66
43	2.05	1086.80
44	2.10	1111.95
45	2.15	1137.09
46	2.20	1162.24
47	2.25	1187.38
48	2.30	1212.52
49	2.35	1237.67
50	2.40	1262.81
51	2.45	1287.96
52	2.50	1313.10
53	2.55	1338.25
54	2.60	1363.39
55	2.65	1388.54
56	2.70	1413.68
57	2.75	1438.83
58	2.80	1463.97
59	2.85	1489.11
60	2.90	1514.26
61	2.95	1539.40
62	3.00	1564.55
63	3.05	1589.69
64	3.10	1614.84
65	3.15	1639.98
66	3.20	1665.13
67	3.25	1690.27
68	3.30	1715.42
69	3.35	1740.56
70	3.40	1765.70
71	3.45	1790.85
72	3.50	1815.99
73	3.55	1841.14
74	3.60	1866.28
75	3.65	1891.43

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76	3.70	1916.57
77	3.75	1941.72
78	3.80	1966.86
79	3.85	1990.75
80	3.90	2014.64
81	3.95	2036.64
1	4.00	-3612.74
2	4.05	-4834.43
3	4.10	-4986.86
4	4.15	-5070.58
5	4.20	-5154.30
6	4.25	-4721.55
7	4.30	-4288.80
8	4.35	-3957.19
9	4.40	-3625.59
10	4.45	-3800.91
11	4.50	-3976.23
12	4.55	-4038.08
13	4.60	-4099.93
14	4.65	-4162.98
15	4.70	-4226.02
16	4.75	-4288.60
17	4.80	-4351.18
18	4.85	-4252.15
19	4.90	-4068.90
20	4.95	-3890.10
21	5.00	-3715.75
22	5.05	-3545.85
23	5.10	-3380.40
24	5.15	-3219.38
25	5.20	-3062.79
26	5.25	-2910.61
27	5.30	-2762.81
28	5.35	-2619.37
29	5.40	-2480.26
30	5.45	-2345.45
31	5.50	-2214.90
32	5.55	-2088.56
33	5.60	-1966.39
34	5.65	-1848.36
35	5.70	-1734.40
36	5.75	-1624.46
37	5.80	-1518.49
38	5.85	-1416.44
39	5.90	-1318.25
40	5.95	-1223.84
41	6.00	-1133.17
42	6.05	-1046.16
43	6.10	-962.75
44	6.15	-882.88
45	6.20	-806.46
46	6.25	-733.44
47	6.30	-663.74
48	6.35	-597.28
49	6.40	-534.00
50	6.45	-473.82
51	6.50	-416.67

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52	6.55	-362.46
53	6.60	-311.12
54	6.65	-262.59
55	6.70	-216.77
56	6.75	-173.59
57	6.80	-132.97
58	6.85	-94.84
59	6.90	-59.11
60	6.95	-25.71
61	7.00	15.68
62	7.05	164.06
63	7.10	292.23
64	7.15	410.81
65	7.20	520.17
66	7.25	620.67
67	7.30	712.69
68	7.35	796.58
69	7.40	872.70
70	7.45	941.41
71	7.50	1003.04
72	7.55	1057.95
73	7.60	1106.45
74	7.65	1148.88
75	7.70	1185.55
76	7.75	1216.77
77	7.80	1242.85
78	7.85	1264.07
79	7.90	1280.73
80	7.95	1293.10
81	8.00	1301.45
82	8.05	1306.04
83	8.10	1307.12
84	8.15	1304.93
85	8.20	1299.70
86	8.25	1291.66
87	8.30	1281.02
88	8.35	1268.00
89	8.40	1252.78
90	8.45	1235.56
91	8.50	1216.52
92	8.55	1195.83
93	8.60	1173.66
94	8.65	1150.16
95	8.70	1125.48
96	8.75	1099.77
97	8.80	1073.15
98	8.85	1045.75
99	8.90	1017.69
100	8.95	989.09
101	9.00	960.03
102	9.05	930.64
103	9.10	900.98
104	9.15	871.16
105	9.20	841.25
106	9.25	811.31
107	9.30	781.43
108	9.35	751.66

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109	9.40	722.06
110	9.45	692.67
111	9.50	663.56
112	9.55	634.75
113	9.60	606.29
114	9.65	578.21
115	9.70	550.54
116	9.75	523.30
117	9.80	496.52
118	9.85	470.21
119	9.90	444.39
120	9.95	419.07
121	10.00	394.26
122	10.05	369.97
123	10.10	346.19
124	10.15	322.93
125	10.20	300.19
126	10.25	277.95
127	10.30	256.23
128	10.35	235.00
129	10.40	214.26
130	10.45	194.00
131	10.50	174.20
132	10.55	154.86
133	10.60	135.94
134	10.65	117.45
135	10.70	99.36
136	10.75	81.66
137	10.80	64.32
138	10.85	47.33
139	10.90	30.67
140	10.95	14.31
141	11.00	-1.76
142	11.05	-17.56
143	11.10	-33.12
144	11.15	-48.45
145	11.20	-63.57
146	11.25	-78.51
147	11.30	-93.27
148	11.35	-107.89
149	11.40	-122.38
150	11.45	-136.75
151	11.50	-151.02
152	11.55	-165.21
153	11.60	-179.33
154	11.65	-193.39
155	11.70	-207.41
156	11.75	-221.40
157	11.80	-235.37
158	11.85	-249.32
159	11.90	-263.26
160	11.95	-277.20
161	12.00	-291.14

**Combinazione n° 10**

**N°**                      **Y**                                      **P**

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1	0.00	0.00
2	0.00	138.29
3	0.05	163.79
4	0.10	189.28
5	0.15	214.78
6	0.20	240.27
7	0.25	265.41
8	0.30	290.56
9	0.35	315.70
10	0.40	340.85
11	0.45	365.99
12	0.50	391.14
13	0.55	416.28
14	0.60	441.43
15	0.65	466.57
16	0.70	491.72
17	0.75	516.86
18	0.80	542.00
19	0.85	567.15
20	0.90	592.29
21	0.95	617.44
22	1.00	642.58
23	1.05	667.73
24	1.10	692.87
25	1.15	718.02
26	1.20	743.16
27	1.25	768.30
28	1.30	793.45
29	1.35	818.59
30	1.40	843.74
31	1.45	868.88
32	1.50	894.03
33	1.55	919.17
34	1.60	944.32
35	1.65	969.46
36	1.70	994.61
37	1.75	1019.75
38	1.80	1044.89
39	1.85	1070.04
40	1.90	1095.18
41	1.95	1120.33
42	2.00	1145.47
43	2.05	1170.62
44	2.10	1195.76
45	2.15	1220.91
46	2.20	1246.05
47	2.25	1271.20
48	2.30	1296.34
49	2.35	1321.48
50	2.40	1346.63
51	2.45	1371.77
52	2.50	1396.92
53	2.55	1422.06
54	2.60	1447.21
55	2.65	1472.35
56	2.70	1497.50
57	2.75	1522.64

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58	2.80	1547.79
59	2.85	1572.93
60	2.90	1598.07
61	2.95	1623.22
62	3.00	1648.36
63	3.05	1673.51
64	3.10	1698.65
65	3.15	1723.80
66	3.20	1748.94
67	3.25	1774.09
68	3.30	1799.23
69	3.35	1824.38
70	3.40	1849.52
71	3.45	1874.66
72	3.50	1899.81
73	3.55	1924.95
74	3.60	1950.10
75	3.65	1975.24
76	3.70	2000.39
77	3.75	2025.53
78	3.80	2050.68
79	3.85	2074.56
80	3.90	2098.45
81	3.95	2120.45
1	4.00	-3569.28
2	4.05	-4834.43
3	4.10	-4986.86
4	4.15	-5070.58
5	4.20	-5154.30
6	4.25	-5024.92
7	4.30	-4895.53
8	4.35	-4544.37
9	4.40	-4193.21
10	4.45	-4050.27
11	4.50	-3907.34
12	4.55	-3973.80
13	4.60	-4040.25
14	4.65	-4103.23
15	4.70	-4166.21
16	4.75	-4228.79
17	4.80	-4291.37
18	4.85	-4846.09
19	4.90	-4687.23
20	4.95	-4483.93
21	5.00	-4285.59
22	5.05	-4092.23
23	5.10	-3903.85
24	5.15	-3720.44
25	5.20	-3541.99
26	5.25	-3368.48
27	5.30	-3199.89
28	5.35	-3036.21
29	5.40	-2877.38
30	5.45	-2723.39
31	5.50	-2574.18
32	5.55	-2429.73
33	5.60	-2289.98

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34	5.65	-2154.87
35	5.70	-2024.37
36	5.75	-1898.40
37	5.80	-1776.92
38	5.85	-1659.86
39	5.90	-1547.15
40	5.95	-1438.74
41	6.00	-1334.54
42	6.05	-1234.49
43	6.10	-1138.51
44	6.15	-1046.54
45	6.20	-958.49
46	6.25	-874.29
47	6.30	-793.86
48	6.35	-717.11
49	6.40	-643.97
50	6.45	-574.35
51	6.50	-508.17
52	6.55	-445.34
53	6.60	-385.79
54	6.65	-329.42
55	6.70	-276.14
56	6.75	-225.88
57	6.80	-178.55
58	6.85	-134.05
59	6.90	-92.30
60	6.95	-53.21
61	7.00	-48.15
62	7.05	82.59
63	7.10	233.35
64	7.15	373.11
65	7.20	502.27
66	7.25	621.26
67	7.30	730.48
68	7.35	830.35
69	7.40	921.26
70	7.45	1003.61
71	7.50	1077.80
72	7.55	1144.20
73	7.60	1203.20
74	7.65	1255.16
75	7.70	1300.44
76	7.75	1339.41
77	7.80	1372.39
78	7.85	1399.73
79	7.90	1421.74
80	7.95	1438.76
81	8.00	1451.08
82	8.05	1458.99
83	8.10	1462.80
84	8.15	1462.76
85	8.20	1459.16
86	8.25	1452.25
87	8.30	1442.27
88	8.35	1429.46
89	8.40	1414.06
90	8.45	1396.27

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91	8.50	1376.32
92	8.55	1354.39
93	8.60	1330.67
94	8.65	1305.36
95	8.70	1278.61
96	8.75	1250.60
97	8.80	1221.47
98	8.85	1191.38
99	8.90	1160.46
100	8.95	1128.84
101	9.00	1096.64
102	9.05	1063.98
103	9.10	1030.97
104	9.15	997.69
105	9.20	964.25
106	9.25	930.73
107	9.30	897.22
108	9.35	863.78
109	9.40	830.48
110	9.45	797.38
111	9.50	764.54
112	9.55	732.01
113	9.60	699.83
114	9.65	668.04
115	9.70	636.69
116	9.75	605.79
117	9.80	575.38
118	9.85	545.48
119	9.90	516.11
120	9.95	487.28
121	10.00	459.00
122	10.05	431.29
123	10.10	404.14
124	10.15	377.56
125	10.20	351.56
126	10.25	326.11
127	10.30	301.23
128	10.35	276.90
129	10.40	253.11
130	10.45	229.85
131	10.50	207.11
132	10.55	184.87
133	10.60	163.12
134	10.65	141.84
135	10.70	121.01
136	10.75	100.60
137	10.80	80.61
138	10.85	61.01
139	10.90	41.78
140	10.95	22.89
141	11.00	4.32
142	11.05	-13.95
143	11.10	-31.93
144	11.15	-49.67
145	11.20	-67.16
146	11.25	-84.45
147	11.30	-101.55

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148	11.35	-118.48
149	11.40	-135.25
150	11.45	-151.90
151	11.50	-168.44
152	11.55	-184.88
153	11.60	-201.25
154	11.65	-217.55
155	11.70	-233.81
156	11.75	-250.02
157	11.80	-266.22
158	11.85	-282.39
159	11.90	-298.56
160	11.95	-314.72
161	12.00	-330.87

**Combinazione n° 11**

<b>N°</b>	<b>Y</b>	<b>P</b>
1	0.00	0.00
2	0.00	276.59
3	0.05	302.43
4	0.10	328.27
5	0.15	354.12
6	0.20	379.96
7	0.25	405.11
8	0.30	430.25
9	0.35	455.40
10	0.40	480.54
11	0.45	505.68
12	0.50	530.83
13	0.55	555.97
14	0.60	581.12
15	0.65	606.26
16	0.70	631.41
17	0.75	656.55
18	0.80	681.70
19	0.85	706.84
20	0.90	731.99
21	0.95	757.13
22	1.00	782.27
23	1.05	807.42
24	1.10	832.56
25	1.15	857.71
26	1.20	882.85
27	1.25	908.00
28	1.30	933.14
29	1.35	958.29
30	1.40	983.43
31	1.45	1008.57
32	1.50	1033.72
33	1.55	1058.86
34	1.60	1084.01
35	1.65	1109.15
36	1.70	1134.30
37	1.75	1159.44
38	1.80	1184.59
39	1.85	1209.73

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40	1.90	1234.88
41	1.95	1260.02
42	2.00	1285.16
43	2.05	1310.31
44	2.10	1335.45
45	2.15	1360.60
46	2.20	1385.74
47	2.25	1410.89
48	2.30	1436.03
49	2.35	1461.18
50	2.40	1486.32
51	2.45	1511.47
52	2.50	1536.61
53	2.55	1561.75
54	2.60	1586.90
55	2.65	1612.04
56	2.70	1637.19
57	2.75	1662.33
58	2.80	1687.48
59	2.85	1712.62
60	2.90	1737.77
61	2.95	1762.91
62	3.00	1788.06
63	3.05	1813.20
64	3.10	1838.34
65	3.15	1863.49
66	3.20	1888.63
67	3.25	1913.78
68	3.30	1938.92
69	3.35	1964.07
70	3.40	1989.21
71	3.45	2014.36
72	3.50	2039.50
73	3.55	2064.65
74	3.60	2089.79
75	3.65	2114.93
76	3.70	2140.08
77	3.75	2165.22
78	3.80	2190.37
79	3.85	2214.25
80	3.90	2238.14
81	3.95	2260.14
1	4.00	-3496.86
2	4.05	-4834.43
3	4.10	-4986.86
4	4.15	-5070.58
5	4.20	-5154.30
6	4.25	-5241.99
7	4.30	-5329.68
8	4.35	-4720.39
9	4.40	-4111.09
10	4.45	-3729.53
11	4.50	-3347.98
12	4.55	-3647.60
13	4.60	-3947.22
14	4.65	-4006.83
15	4.70	-4066.43

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16	4.75	-4129.06
17	4.80	-4191.69
18	4.85	-4771.32
19	4.90	-5350.96
20	4.95	-5779.99
21	5.00	-5532.68
22	5.05	-5291.31
23	5.10	-5055.88
24	5.15	-4826.39
25	5.20	-4602.85
26	5.25	-4385.26
27	5.30	-4173.58
28	5.35	-3967.80
29	5.40	-3767.90
30	5.45	-3573.85
31	5.50	-3385.59
32	5.55	-3203.10
33	5.60	-3026.31
34	5.65	-2855.19
35	5.70	-2689.67
36	5.75	-2529.69
37	5.80	-2375.19
38	5.85	-2226.09
39	5.90	-2082.34
40	5.95	-1943.84
41	6.00	-1810.53
42	6.05	-1682.33
43	6.10	-1559.14
44	6.15	-1440.89
45	6.20	-1327.49
46	6.25	-1218.85
47	6.30	-1114.87
48	6.35	-1015.47
49	6.40	-920.54
50	6.45	-829.99
51	6.50	-743.73
52	6.55	-661.65
53	6.60	-583.66
54	6.65	-509.66
55	6.70	-439.53
56	6.75	-373.19
57	6.80	-310.52
58	6.85	-251.42
59	6.90	-195.80
60	6.95	-143.54
61	7.00	-272.59
62	7.05	-232.13
63	7.10	-28.16
64	7.15	161.77
65	7.20	338.16
66	7.25	501.53
67	7.30	652.36
68	7.35	791.16
69	7.40	918.41
70	7.45	1034.61
71	7.50	1140.23
72	7.55	1235.74

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73	7.60	1321.62
74	7.65	1398.31
75	7.70	1466.28
76	7.75	1525.95
77	7.80	1577.77
78	7.85	1622.13
79	7.90	1659.46
80	7.95	1690.16
81	8.00	1714.60
82	8.05	1733.16
83	8.10	1746.21
84	8.15	1754.09
85	8.20	1757.16
86	8.25	1755.72
87	8.30	1750.11
88	8.35	1740.63
89	8.40	1727.56
90	8.45	1711.19
91	8.50	1691.78
92	8.55	1669.60
93	8.60	1644.89
94	8.65	1617.89
95	8.70	1588.81
96	8.75	1557.88
97	8.80	1525.29
98	8.85	1491.23
99	8.90	1455.89
100	8.95	1419.43
101	9.00	1382.03
102	9.05	1343.82
103	9.10	1304.95
104	9.15	1265.56
105	9.20	1225.77
106	9.25	1185.69
107	9.30	1145.44
108	9.35	1105.11
109	9.40	1064.79
110	9.45	1024.58
111	9.50	984.53
112	9.55	944.74
113	9.60	905.25
114	9.65	866.13
115	9.70	827.43
116	9.75	789.19
117	9.80	751.46
118	9.85	714.26
119	9.90	677.63
120	9.95	641.59
121	10.00	606.16
122	10.05	571.36
123	10.10	537.19
124	10.15	503.67
125	10.20	470.80
126	10.25	438.59
127	10.30	407.01
128	10.35	376.09
129	10.40	345.79

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130	10.45	316.12
131	10.50	287.05
132	10.55	258.58
133	10.60	230.69
134	10.65	203.36
135	10.70	176.56
136	10.75	150.28
137	10.80	124.49
138	10.85	99.17
139	10.90	74.29
140	10.95	49.82
141	11.00	25.75
142	11.05	2.05
143	11.10	-21.32
144	11.15	-44.38
145	11.20	-67.15
146	11.25	-89.66
147	11.30	-111.94
148	11.35	-134.01
149	11.40	-155.90
150	11.45	-177.64
151	11.50	-199.23
152	11.55	-220.71
153	11.60	-242.09
154	11.65	-263.40
155	11.70	-284.64
156	11.75	-305.84
157	11.80	-327.01
158	11.85	-348.16
159	11.90	-369.29
160	11.95	-390.42
161	12.00	-411.54

**Combinazione n° 12**

<b>N°</b>	<b>Y</b>	<b>P</b>
1	0.00	0.00
2	0.00	55.32
3	0.05	81.89
4	0.10	108.46
5	0.15	135.03
6	0.20	161.61
7	0.25	188.04
8	0.30	214.47
9	0.35	240.90
10	0.40	267.33
11	0.45	293.77
12	0.50	320.20
13	0.55	346.63
14	0.60	373.06
15	0.65	399.49
16	0.70	425.93
17	0.75	452.36
18	0.80	478.79
19	0.85	505.22
20	0.90	531.65
21	0.95	558.09

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22	1.00	584.52
23	1.05	610.95
24	1.10	637.38
25	1.15	663.81
26	1.20	690.25
27	1.25	716.68
28	1.30	743.11
29	1.35	769.54
30	1.40	795.98
31	1.45	822.41
32	1.50	848.84
33	1.55	875.27
34	1.60	901.70
35	1.65	928.14
36	1.70	954.57
37	1.75	981.00
38	1.80	1007.43
39	1.85	1033.86
40	1.90	1060.30
41	1.95	1086.73
42	2.00	1113.16
43	2.05	1139.59
44	2.10	1166.02
45	2.15	1192.46
46	2.20	1218.89
47	2.25	1245.32
48	2.30	1271.75
49	2.35	1298.18
50	2.40	1324.62
51	2.45	1351.05
52	2.50	1377.48
53	2.55	1403.91
54	2.60	1430.35
55	2.65	1456.78
56	2.70	1483.21
57	2.75	1509.64
58	2.80	1536.07
59	2.85	1562.51
60	2.90	1588.94
61	2.95	1615.37
62	3.00	1641.80
63	3.05	1668.23
64	3.10	1694.67
65	3.15	1721.10
66	3.20	1747.53
67	3.25	1773.96
68	3.30	1800.39
69	3.35	1826.83
70	3.40	1853.26
71	3.45	1879.69
72	3.50	1906.12
73	3.55	1932.55
74	3.60	1958.99
75	3.65	1985.42
76	3.70	2011.85
77	3.75	2038.28
78	3.80	2064.72

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79	3.85	2089.89
80	3.90	2115.06
81	3.95	2138.35
1	4.00	-3505.93
2	4.05	-4834.43
3	4.10	-4986.86
4	4.15	-5070.58
5	4.20	-5154.30
6	4.25	-4721.55
7	4.30	-4288.80
8	4.35	-3957.19
9	4.40	-3625.59
10	4.45	-3800.91
11	4.50	-3976.23
12	4.55	-4038.08
13	4.60	-4099.93
14	4.65	-4162.98
15	4.70	-4226.02
16	4.75	-4288.60
17	4.80	-4351.18
18	4.85	-4653.35
19	4.90	-4455.57
20	4.95	-4262.49
21	5.00	-4074.13
22	5.05	-3890.48
23	5.10	-3711.56
24	5.15	-3537.35
25	5.20	-3367.85
26	5.25	-3203.04
27	5.30	-3042.90
28	5.35	-2887.41
29	5.40	-2736.53
30	5.45	-2590.24
31	5.50	-2448.49
32	5.55	-2311.25
33	5.60	-2178.47
34	5.65	-2050.10
35	5.70	-1926.10
36	5.75	-1806.40
37	5.80	-1690.97
38	5.85	-1579.72
39	5.90	-1472.62
40	5.95	-1369.58
41	6.00	-1270.55
42	6.05	-1175.46
43	6.10	-1084.23
44	6.15	-996.81
45	6.20	-913.11
46	6.25	-833.06
47	6.30	-756.59
48	6.35	-683.63
49	6.40	-614.08
50	6.45	-547.88
51	6.50	-484.95
52	6.55	-425.21
53	6.60	-368.57
54	6.65	-314.95

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55	6.70	-264.28
56	6.75	-216.47
57	6.80	-171.44
58	6.85	-129.10
59	6.90	-89.37
60	6.95	-52.18
61	7.00	-50.24
62	7.05	71.32
63	7.10	214.85
64	7.15	347.91
65	7.20	470.90
66	7.25	584.23
67	7.30	688.27
68	7.35	783.41
69	7.40	870.05
70	7.45	948.55
71	7.50	1019.28
72	7.55	1082.62
73	7.60	1138.91
74	7.65	1188.51
75	7.70	1231.76
76	7.75	1269.00
77	7.80	1300.55
78	7.85	1326.73
79	7.90	1347.85
80	7.95	1364.21
81	8.00	1376.10
82	8.05	1383.81
83	8.10	1387.60
84	8.15	1387.73
85	8.20	1384.47
86	8.25	1378.06
87	8.30	1368.73
88	8.35	1356.70
89	8.40	1342.20
90	8.45	1325.44
91	8.50	1306.60
92	8.55	1285.88
93	8.60	1263.46
94	8.65	1239.52
95	8.70	1214.21
96	8.75	1187.69
97	8.80	1160.11
98	8.85	1131.60
99	8.90	1102.30
100	8.95	1072.34
101	9.00	1041.82
102	9.05	1010.85
103	9.10	979.54
104	9.15	947.98
105	9.20	916.27
106	9.25	884.47
107	9.30	852.67
108	9.35	820.94
109	9.40	789.34
110	9.45	757.93
111	9.50	726.76

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112	9.55	695.88
113	9.60	665.33
114	9.65	635.16
115	9.70	605.39
116	9.75	576.05
117	9.80	547.18
118	9.85	518.78
119	9.90	490.88
120	9.95	463.50
121	10.00	436.64
122	10.05	410.32
123	10.10	384.53
124	10.15	359.28
125	10.20	334.57
126	10.25	310.39
127	10.30	286.75
128	10.35	263.63
129	10.40	241.02
130	10.45	218.92
131	10.50	197.31
132	10.55	176.17
133	10.60	155.50
134	10.65	135.27
135	10.70	115.47
136	10.75	96.07
137	10.80	77.07
138	10.85	58.43
139	10.90	40.15
140	10.95	22.19
141	11.00	4.53
142	11.05	-12.83
143	11.10	-29.94
144	11.15	-46.80
145	11.20	-63.43
146	11.25	-79.87
147	11.30	-96.13
148	11.35	-112.23
149	11.40	-128.18
150	11.45	-144.02
151	11.50	-159.74
152	11.55	-175.38
153	11.60	-190.94
154	11.65	-206.45
155	11.70	-221.91
156	11.75	-237.33
157	11.80	-252.73
158	11.85	-268.11
159	11.90	-283.48
160	11.95	-298.85
161	12.00	-314.22

**Combinazione n° 13**

<b>N°</b>	<b>Y</b>	<b>P</b>
1	0.00	0.00
2	0.00	138.29
3	0.05	165.18

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4	0.10	192.06
5	0.15	218.94
6	0.20	245.83
7	0.25	272.36
8	0.30	298.89
9	0.35	325.43
10	0.40	351.96
11	0.45	378.50
12	0.50	405.03
13	0.55	431.56
14	0.60	458.10
15	0.65	484.63
16	0.70	511.17
17	0.75	537.70
18	0.80	564.23
19	0.85	590.77
20	0.90	617.30
21	0.95	643.83
22	1.00	670.37
23	1.05	696.90
24	1.10	723.44
25	1.15	749.97
26	1.20	776.50
27	1.25	803.04
28	1.30	829.57
29	1.35	856.11
30	1.40	882.64
31	1.45	909.17
32	1.50	935.71
33	1.55	962.24
34	1.60	988.77
35	1.65	1015.31
36	1.70	1041.84
37	1.75	1068.38
38	1.80	1094.91
39	1.85	1121.44
40	1.90	1147.98
41	1.95	1174.51
42	2.00	1201.05
43	2.05	1227.58
44	2.10	1254.11
45	2.15	1280.65
46	2.20	1307.18
47	2.25	1333.71
48	2.30	1360.25
49	2.35	1386.78
50	2.40	1413.32
51	2.45	1439.85
52	2.50	1466.38
53	2.55	1492.92
54	2.60	1519.45
55	2.65	1545.99
56	2.70	1572.52
57	2.75	1599.05
58	2.80	1625.59
59	2.85	1652.12
60	2.90	1678.65

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61	2.95	1705.19
62	3.00	1731.72
63	3.05	1758.26
64	3.10	1784.79
65	3.15	1811.32
66	3.20	1837.86
67	3.25	1864.39
68	3.30	1890.93
69	3.35	1917.46
70	3.40	1943.99
71	3.45	1970.53
72	3.50	1997.06
73	3.55	2023.59
74	3.60	2050.13
75	3.65	2076.66
76	3.70	2103.20
77	3.75	2129.73
78	3.80	2156.26
79	3.85	2181.54
80	3.90	2206.82
81	3.95	2230.21
1	4.00	-3454.04
2	4.05	-4834.43
3	4.10	-4986.86
4	4.15	-5070.58
5	4.20	-5154.30
6	4.25	-5024.92
7	4.30	-4895.53
8	4.35	-4544.37
9	4.40	-4193.21
10	4.45	-4050.27
11	4.50	-3907.34
12	4.55	-3973.80
13	4.60	-4040.25
14	4.65	-4103.23
15	4.70	-4166.21
16	4.75	-4228.79
17	4.80	-4291.37
18	4.85	-4846.09
19	4.90	-5124.70
20	4.95	-4905.46
21	5.00	-4691.48
22	5.05	-4482.77
23	5.10	-4279.33
24	5.15	-4081.17
25	5.20	-3888.27
26	5.25	-3700.63
27	5.30	-3518.22
28	5.35	-3341.02
29	5.40	-3169.00
30	5.45	-3002.12
31	5.50	-2840.35
32	5.55	-2683.65
33	5.60	-2531.97
34	5.65	-2385.25
35	5.70	-2243.45
36	5.75	-2106.50

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37	5.80	-1974.35
38	5.85	-1846.93
39	5.90	-1724.18
40	5.95	-1606.02
41	6.00	-1492.39
42	6.05	-1383.21
43	6.10	-1278.40
44	6.15	-1177.89
45	6.20	-1081.60
46	6.25	-989.44
47	6.30	-901.34
48	6.35	-817.21
49	6.40	-736.96
50	6.45	-660.51
51	6.50	-587.76
52	6.55	-518.64
53	6.60	-453.05
54	6.65	-390.90
55	6.70	-332.09
56	6.75	-276.55
57	6.80	-224.17
58	6.85	-174.87
59	6.90	-128.55
60	6.95	-85.11
61	7.00	-128.23
62	7.05	-31.15
63	7.10	137.24
64	7.15	293.64
65	7.20	438.50
66	7.25	572.26
67	7.30	695.35
68	7.35	808.22
69	7.40	911.29
70	7.45	1004.98
71	7.50	1089.73
72	7.55	1165.93
73	7.60	1234.00
74	7.65	1294.34
75	7.70	1347.32
76	7.75	1393.34
77	7.80	1432.75
78	7.85	1465.94
79	7.90	1493.24
80	7.95	1514.99
81	8.00	1531.54
82	8.05	1543.20
83	8.10	1550.29
84	8.15	1553.10
85	8.20	1551.92
86	8.25	1547.04
87	8.30	1538.73
88	8.35	1527.24
89	8.40	1512.82
90	8.45	1495.72
91	8.50	1476.15
92	8.55	1454.34
93	8.60	1430.50

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94	8.65	1404.83
95	8.70	1377.51
96	8.75	1348.72
97	8.80	1318.63
98	8.85	1287.41
99	8.90	1255.20
100	8.95	1222.15
101	9.00	1188.40
102	9.05	1154.07
103	9.10	1119.27
104	9.15	1084.12
105	9.20	1048.73
106	9.25	1013.19
107	9.30	977.58
108	9.35	941.99
109	9.40	906.49
110	9.45	871.16
111	9.50	836.06
112	9.55	801.23
113	9.60	766.75
114	9.65	732.64
115	9.70	698.95
116	9.75	665.72
117	9.80	632.98
118	9.85	600.75
119	9.90	569.06
120	9.95	537.92
121	10.00	507.35
122	10.05	477.36
123	10.10	447.96
124	10.15	419.15
125	10.20	390.93
126	10.25	363.31
127	10.30	336.26
128	10.35	309.80
129	10.40	283.91
130	10.45	258.57
131	10.50	233.79
132	10.55	209.53
133	10.60	185.78
134	10.65	162.54
135	10.70	139.77
136	10.75	117.45
137	10.80	95.57
138	10.85	74.11
139	10.90	53.04
140	10.95	32.33
141	11.00	11.97
142	11.05	-8.07
143	11.10	-27.81
144	11.15	-47.28
145	11.20	-66.51
146	11.25	-85.50
147	11.30	-104.29
148	11.35	-122.90
149	11.40	-141.35
150	11.45	-159.66

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151	11.50	-177.85
152	11.55	-195.94
153	11.60	-213.95
154	11.65	-231.89
155	11.70	-249.78
156	11.75	-267.63
157	11.80	-285.45
158	11.85	-303.25
159	11.90	-321.04
160	11.95	-338.82
161	12.00	-356.61

**Combinazione n° 14**

<b>N°</b>	<b>Y</b>	<b>P</b>
1	0.00	0.00
2	0.00	276.59
3	0.05	303.99
4	0.10	331.39
5	0.15	358.79
6	0.20	386.20
7	0.25	412.90
8	0.30	439.60
9	0.35	466.31
10	0.40	493.01
11	0.45	519.71
12	0.50	546.42
13	0.55	573.12
14	0.60	599.83
15	0.65	626.53
16	0.70	653.23
17	0.75	679.94
18	0.80	706.64
19	0.85	733.34
20	0.90	760.05
21	0.95	786.75
22	1.00	813.45
23	1.05	840.16
24	1.10	866.86
25	1.15	893.56
26	1.20	920.27
27	1.25	946.97
28	1.30	973.67
29	1.35	1000.38
30	1.40	1027.08
31	1.45	1053.78
32	1.50	1080.49
33	1.55	1107.19
34	1.60	1133.89
35	1.65	1160.60
36	1.70	1187.30
37	1.75	1214.00
38	1.80	1240.71
39	1.85	1267.41
40	1.90	1294.11
41	1.95	1320.82
42	2.00	1347.52

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43	2.05	1374.23
44	2.10	1400.93
45	2.15	1427.63
46	2.20	1454.34
47	2.25	1481.04
48	2.30	1507.74
49	2.35	1534.45
50	2.40	1561.15
51	2.45	1587.85
52	2.50	1614.56
53	2.55	1641.26
54	2.60	1667.96
55	2.65	1694.67
56	2.70	1721.37
57	2.75	1748.07
58	2.80	1774.78
59	2.85	1801.48
60	2.90	1828.18
61	2.95	1854.89
62	3.00	1881.59
63	3.05	1908.29
64	3.10	1935.00
65	3.15	1961.70
66	3.20	1988.40
67	3.25	2015.11
68	3.30	2041.81
69	3.35	2068.51
70	3.40	2095.22
71	3.45	2121.92
72	3.50	2148.63
73	3.55	2175.33
74	3.60	2202.03
75	3.65	2228.74
76	3.70	2255.44
77	3.75	2282.14
78	3.80	2308.85
79	3.85	2334.29
80	3.90	2359.74
81	3.95	2383.30
1	4.00	-3367.54
2	4.05	-4834.43
3	4.10	-4986.86
4	4.15	-5070.58
5	4.20	-5154.30
6	4.25	-5241.99
7	4.30	-5329.68
8	4.35	-4720.39
9	4.40	-4111.09
10	4.45	-3729.53
11	4.50	-3347.98
12	4.55	-3647.60
13	4.60	-3947.22
14	4.65	-4006.83
15	4.70	-4066.43
16	4.75	-4129.06
17	4.80	-4191.69
18	4.85	-4771.32

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19	4.90	-5350.96
20	4.95	-5941.61
21	5.00	-6025.85
22	5.05	-5766.24
23	5.10	-5512.92
24	5.15	-5265.89
25	5.20	-5025.15
26	5.25	-4790.70
27	5.30	-4562.54
28	5.35	-4340.63
29	5.40	-4124.96
30	5.45	-3915.49
31	5.50	-3712.20
32	5.55	-3515.03
33	5.60	-3323.94
34	5.65	-3138.87
35	5.70	-2959.78
36	5.75	-2786.59
37	5.80	-2619.24
38	5.85	-2457.67
39	5.90	-2301.80
40	5.95	-2151.54
41	6.00	-2006.83
42	6.05	-1867.58
43	6.10	-1733.70
44	6.15	-1605.11
45	6.20	-1481.70
46	6.25	-1363.40
47	6.30	-1250.10
48	6.35	-1141.70
49	6.40	-1038.12
50	6.45	-939.23
51	6.50	-844.95
52	6.55	-755.18
53	6.60	-669.79
54	6.65	-588.70
55	6.70	-511.78
56	6.75	-438.94
57	6.80	-370.07
58	6.85	-305.05
59	6.90	-243.78
60	6.95	-186.15
61	7.00	-380.71
62	7.05	-387.76
63	7.10	-161.90
64	7.15	48.75
65	7.20	244.72
66	7.25	426.53
67	7.30	594.72
68	7.35	749.82
69	7.40	892.35
70	7.45	1022.84
71	7.50	1141.80
72	7.55	1249.72
73	7.60	1347.12
74	7.65	1434.49
75	7.70	1512.30

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76	7.75	1581.03
77	7.80	1641.13
78	7.85	1693.07
79	7.90	1737.27
80	7.95	1774.18
81	8.00	1804.20
82	8.05	1827.74
83	8.10	1845.19
84	8.15	1856.94
85	8.20	1863.35
86	8.25	1864.77
87	8.30	1861.56
88	8.35	1854.03
89	8.40	1842.51
90	8.45	1827.31
91	8.50	1808.71
92	8.55	1787.00
93	8.60	1762.44
94	8.65	1735.29
95	8.70	1705.79
96	8.75	1674.18
97	8.80	1640.68
98	8.85	1605.49
99	8.90	1568.83
100	8.95	1530.86
101	9.00	1491.78
102	9.05	1451.74
103	9.10	1410.91
104	9.15	1369.43
105	9.20	1327.43
106	9.25	1285.06
107	9.30	1242.42
108	9.35	1199.62
109	9.40	1156.78
110	9.45	1113.98
111	9.50	1071.30
112	9.55	1028.84
113	9.60	986.65
114	9.65	944.80
115	9.70	903.36
116	9.75	862.37
117	9.80	821.88
118	9.85	781.93
119	9.90	742.54
120	9.95	703.76
121	10.00	665.60
122	10.05	628.09
123	10.10	591.23
124	10.15	555.04
125	10.20	519.52
126	10.25	484.68
127	10.30	450.52
128	10.35	417.02
129	10.40	384.19
130	10.45	352.01
131	10.50	320.48
132	10.55	289.56

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133	10.60	259.26
134	10.65	229.55
135	10.70	200.40
136	10.75	171.80
137	10.80	143.72
138	10.85	116.13
139	10.90	89.02
140	10.95	62.34
141	11.00	36.09
142	11.05	10.22
143	11.10	-15.29
144	11.15	-40.47
145	11.20	-65.34
146	11.25	-89.94
147	11.30	-114.29
148	11.35	-138.42
149	11.40	-162.35
150	11.45	-186.11
151	11.50	-209.73
152	11.55	-233.22
153	11.60	-256.61
154	11.65	-279.92
155	11.70	-303.16
156	11.75	-326.35
157	11.80	-349.51
158	11.85	-372.65
159	11.90	-395.78
160	11.95	-418.89
161	12.00	-442.01

## Valori massimi e minimi sollecitazioni per metro di paratia

### Simbologia adottata

$n^\circ$	Indice della combinazione/fase
Tipo	Tipo della combinazione/fase
$Y$	ordinata della sezione rispetto alla testa espressa in [m]
$M$	momento flettente massimo e minimo espresso in [kgm]
$N$	sforzo normale massimo e minimo espresso in [kg] (positivo di compressione)
$T$	taglio massimo e minimo espresso in [kg]

$n^\circ$	Tipo	M	$Y_M$	T	$Y_T$	N	$Y_N$	
1	[A1-M1]	9877	5.10	5229	4.00	11168	12.00	MAX
--	--	-226	10.20	-3507	7.10	0	0.00	MIN
2	[A2-M2]	10681	5.35	5033	4.00	11168	12.00	MAX
--	--	-215	10.35	-3900	7.30	0	0.00	MIN
3	[A1-M1]	14783	5.25	6905	4.00	11168	12.00	MAX
--	--	-318	10.30	-5307	7.20	0	0.00	MIN
4	[A2-M2]	17113	5.75	6851	4.00	11168	12.00	MAX
--	--	-268	10.65	-6824	7.60	0	0.00	MIN
5	[A1-M1] S	8254	5.05	4460	4.00	11168	12.00	MAX
--	--	-196	10.15	-2922	7.00	0	0.00	MIN
6	[A2-M2] S	12057	5.45	5534	4.00	11168	12.00	MAX
--	--	-233	10.40	-4463	7.35	0	0.00	MIN
7	[A1-M1] S	8938	5.05	4708	4.00	11168	12.00	MAX
--	--	-210	10.15	-3167	7.05	0	0.00	MIN
8	[A2-M2] S	13220	5.50	5842	4.00	11168	12.00	MAX
--	--	-245	10.45	-4967	7.40	0	0.00	MIN
9	[SLEQ]	7854	5.00	4246	4.00	11168	12.00	MAX
--	--	-192	10.10	-2779	6.95	0	0.00	MIN
10	[SLEF]	8784	5.05	4581	4.00	11168	12.00	MAX
--	--	-211	10.10	-3109	7.00	0	0.00	MIN
11	[SLER]	10498	5.10	5140	4.00	11168	12.00	MAX
--	--	-241	10.20	-3727	7.10	0	0.00	MIN
12	[SLEQ] S	8332	5.05	4452	4.00	11168	12.00	MAX
--	--	-200	10.10	-2949	7.00	0	0.00	MIN
13	[SLEF] S	9310	5.05	4803	4.00	11168	12.00	MAX
--	--	-219	10.15	-3298	7.05	0	0.00	MIN
14	[SLER] S	11109	5.15	5389	4.00	11168	12.00	MAX
--	--	-251	10.20	-3953	7.10	0	0.00	MIN

## Spostamenti massimi e minimi della paratia

### Simbologia adottata

$n^\circ$  Indice della combinazione/fase

Tipo Tipo della combinazione/fase

$Y$  ordinata della sezione rispetto alla testa della paratia espressa in [m]

$U$  spostamento orizzontale massimo e minimo espresso in [cm] positivo verso valle

$V$  spostamento verticale massimo e minimo espresso in [cm] positivo verso il basso

$n^\circ$	Tipo	$U$	$Y_U$	$V$	$Y_V$	
1	[A1-M1]	1.7915	0.00	0.0097	0.00	MAX
--	--	-0.0180	8.20	0.0000	0.00	MIN
2	[A2-M2]	2.1269	0.00	0.0097	0.00	MAX
--	--	-0.0201	8.45	0.0000	0.00	MIN
3	[A1-M1]	2.8397	0.00	0.0097	0.00	MAX
--	--	-0.0273	8.30	0.0000	0.00	MIN
4	[A2-M2]	4.0076	0.00	0.0097	0.00	MAX
--	--	-0.0355	8.75	0.0000	0.00	MIN
5	[A1-M1] S	1.4526	0.00	0.0097	0.00	MAX
--	--	-0.0150	8.15	0.0000	0.00	MIN
6	[A2-M2] S	2.4723	0.00	0.0097	0.00	MAX
--	--	-0.0231	8.50	0.0000	0.00	MIN
7	[A1-M1] S	1.5914	0.00	0.0097	0.00	MAX
--	--	-0.0162	8.15	0.0000	0.00	MIN
8	[A2-M2] S	2.7926	0.00	0.0097	0.00	MAX
--	--	-0.0257	8.55	0.0000	0.00	MIN
9	[SLEQ]	1.3541	0.00	0.0097	0.00	MAX
--	--	-0.0142	8.10	0.0000	0.00	MIN
10	[SLEF]	1.5405	0.00	0.0097	0.00	MAX
--	--	-0.0159	8.10	0.0000	0.00	MIN
11	[SLER]	1.9150	0.00	0.0097	0.00	MAX
--	--	-0.0191	8.20	0.0000	0.00	MIN
12	[SLEQ] S	1.4588	0.00	0.0097	0.00	MAX
--	--	-0.0151	8.15	0.0000	0.00	MIN
13	[SLEF] S	1.6573	0.00	0.0097	0.00	MAX
--	--	-0.0169	8.15	0.0000	0.00	MIN
14	[SLER] S	2.0532	0.00	0.0097	0.00	MAX
--	--	-0.0203	8.25	0.0000	0.00	MIN

## Stabilità globale

Metodo di Fellenius

Numero di cerchi analizzati 100

Simbologia adottata

$n^\circ$	Indice della combinazione/fase
Tipo	Tipo della combinazione/fase
$(X_C; Y_C)$	Coordinate centro cerchio superficie di scorrimento, espresse in [m]
R	Raggio cerchio superficie di scorrimento, espresso in [m]
$(X_V; Y_V)$	Coordinate intersezione del cerchio con il pendio a valle, espresse in [m]
$(X_M; Y_M)$	Coordinate intersezione del cerchio con il pendio a monte, espresse in [m]
FS	Coefficiente di sicurezza

$n^\circ$	Tipo	$(X_C, Y_C)$	R	$(X_V, Y_V)$	$(X_M, Y_M)$	FS
2	[A2-M2]	(-10.80; 3.60)	18.97	(-18.06; -13.93)	(7.84; 0.00)	2.13
4	[A2-M2]	(-10.80; 10.80)	25.23	(-17.38; -13.55)	(12.51; 1.13)	1.86
6	[A2-M2] S	(-10.80; 4.80)	19.97	(-17.93; -13.86)	(8.63; 0.16)	1.97
8	[A2-M2] S	(-10.80; 7.20)	22.03	(-17.69; -13.72)	(10.21; 0.55)	1.93

## Combinazione n° 4

Numero di strisce 50

Simbologia adottata

Le ascisse X sono considerate positive verso monte

Le ordinate Y sono considerate positive verso l'alto

Origine in testa alla paratia (spigolo contro terra)

Le strisce sono numerate da monte verso valle

$N^\circ$	numero d'ordine della striscia
W	peso della striscia espresso in [kg]
$\alpha$	angolo fra la base della striscia e l'orizzontale espresso in gradi (positivo antiorario)
$\phi$	angolo d'attrito del terreno lungo la base della striscia
c	coesione del terreno lungo la base della striscia espressa in [kg/cmq]
b	larghezza della striscia espressa in [m]
L	sviluppo della base della striscia espressa in [m] ( $L=b/\cos\alpha$ )
u	pressione neutra lungo la base della striscia espressa in [kg/cmq]
Ctn, Ctt	contributo alla striscia normale e tangenziale del tirante espresse in [kg]

## Caratteristiche delle strisce

$N^\circ$	W	$\alpha(^{\circ})$	$W\sin\alpha$	L	$\phi$	c	u	(Ctn; Ctt)
1	281.06	-14.42	-70.01	0.62	15.15	0.272	0.000	(0; 0)
2	849.55	-13.02	-191.43	0.62	15.15	0.272	0.000	(0; 0)
3	1399.64	-11.63	-282.13	0.61	15.15	0.272	0.000	(0; 0)
4	1931.63	-10.24	-343.46	0.61	15.15	0.272	0.000	(0; 0)
5	2445.76	-8.86	-376.76	0.61	15.15	0.272	0.000	(0; 0)
6	2942.25	-7.49	-383.33	0.60	15.15	0.272	0.000	(0; 0)
7	3421.29	-6.11	-364.45	0.60	15.15	0.272	0.000	(0; 0)
8	3883.08	-4.75	-321.37	0.60	15.15	0.272	0.000	(0; 0)
9	4328.95	-3.38	-255.41	0.60	29.26	0.400	0.000	(0; 0)
10	4758.19	-2.02	-167.67	0.60	29.26	0.400	0.000	(0; 0)

Relazione e fascicolo di calcolo strutturale

11	5170.31	-0.66	-59.34	0.60	29.26	0.400	0.000	(0; 0)
12	5565.35	0.70	68.37	0.60	29.26	0.400	0.000	(0; 0)
13	5943.31	2.07	214.24	0.60	29.26	0.400	0.000	(0; 0)
14	6304.15	3.43	377.05	0.60	29.26	0.400	0.000	(0; 0)
15	6647.81	4.79	555.56	0.60	29.26	0.400	0.000	(0; 0)
16	6974.22	6.16	748.56	0.60	29.26	0.400	0.000	(0; 0)
17	7283.25	7.53	954.79	0.60	29.26	0.400	0.000	(0; 0)
18	7574.74	8.91	1173.00	0.61	29.26	0.400	0.000	(0; 0)
19	7848.52	10.29	1401.89	0.61	29.26	0.400	0.000	(0; 0)
20	8104.36	11.68	1640.16	0.61	29.26	0.400	0.000	(0; 0)
21	8342.02	13.07	1886.48	0.62	29.26	0.400	0.000	(0; 0)
22	8561.19	14.47	2139.48	0.62	29.26	0.400	0.000	(0; 0)
23	8761.55	15.88	2397.74	0.62	29.26	0.400	0.000	(0; 0)
24	8942.70	17.30	2659.82	0.63	29.26	0.400	0.000	(0; 0)
25	9104.23	18.73	2924.20	0.63	29.26	0.400	0.000	(0; 0)
26	9245.64	20.18	3189.32	0.64	29.26	0.400	0.000	(0; 0)
27	9366.38	21.64	3453.54	0.64	29.26	0.400	0.000	(0; 0)
28	9465.86	23.11	3715.15	0.65	29.26	0.400	0.000	(0; 0)
29	9543.37	24.60	3972.35	0.66	29.26	0.400	0.000	(0; 0)
30	14620.52	26.11	6434.40	0.67	29.26	0.400	0.000	(0; 0)
31	14288.12	27.65	6630.16	0.68	29.26	0.400	0.000	(0; 0)
32	13930.58	29.21	6797.75	0.69	29.26	0.400	0.000	(0; 0)
33	13546.76	30.79	6934.76	0.70	29.26	0.400	0.000	(0; 0)
34	13135.36	32.40	7038.63	0.72	29.26	0.400	0.000	(0; 0)
35	12694.91	34.04	7106.55	0.73	29.26	0.400	0.000	(0; 0)
36	12223.74	35.71	7135.44	0.74	29.26	0.400	0.000	(0; 0)
37	11719.89	37.42	7121.92	0.76	29.26	0.400	0.000	(0; 0)
38	11181.12	39.17	7062.23	0.78	29.26	0.400	0.000	(0; 0)
39	10604.80	40.96	6952.13	0.80	29.26	0.400	0.000	(0; 0)
40	9987.82	42.81	6786.81	0.82	29.26	0.400	0.000	(0; 0)
41	9326.50	44.70	6560.76	0.85	29.26	0.400	0.000	(0; 0)
42	8616.36	46.67	6267.56	0.88	29.26	0.400	0.000	(0; 0)
43	9865.20	48.67	7407.92	0.88	29.26	0.400	0.000	(0; 0)
44	10007.80	50.72	7746.11	0.92	29.26	0.400	0.000	(0; 0)
45	9316.23	52.85	7426.00	0.96	29.26	0.400	0.000	(0; 0)
46	8553.01	55.11	7015.21	1.02	29.26	0.400	0.000	(0; 0)
47	7705.33	57.49	6497.99	1.08	29.26	0.400	0.000	(0; 0)
48	6755.42	60.05	5853.08	1.17	29.26	0.400	0.000	(0; 0)
49	5677.31	62.82	5050.31	1.27	29.26	0.400	0.000	(0; 0)
50	4443.43	65.56	4045.37	1.41	15.15	0.272	0.000	(0; 0)

Resistenza a taglio paratia= 0.00 [kg]

$\Sigma W_i = 393190.53$  [kg]

$\Sigma W_i \sin \alpha_i = 170527.43$  [kg]

$\Sigma W_i \cos \alpha_i \tan \phi_i = 180529.49$  [kg]

$\Sigma c_i b_i / \cos \alpha_i = 137420.72$  [kg]

## Verifica armatura muro (Sezioni critiche)

### Simbologia adottata

$n^\circ$	Indice della combinazione/fase
Tipo	Tipo della Combinazione/Fase
$Y$	ordinata della sezione con fattore di sicurezza minimo, espressa in [m]
$M$	momento flettente, espresso in [kgm]
$N$	sfuerzo normale, espresso in [kg] (positivo di compressione)
$Mu$	momento ultimo di riferimento, espresso in [kgm]
$Nu$	sfuerzo normale ultimo di riferimento, espresso in [kg]
$FS$	fattore di sicurezza (rapporto fra la sollecitazione ultima e la sollecitazione di esercizio)

$n^\circ$	Tipo	$Y$	$M$	$N$	$Mu$	$Nu$	$FS$
1	[A1-M1]	4.00	6974	4000	21600	12390	3.10
2	[A2-M2]	4.00	6713	4000	21687	12923	3.23
3	[A1-M1]	4.00	10325	4000	20902	8098	2.02
4	[A2-M2]	4.00	10347	4000	20899	8080	2.02
5	[A1-M1] S	4.00	5949	4000	21990	14787	3.70
6	[A2-M2] S	4.00	7380	4000	21479	11641	2.91
7	[A1-M1] S	4.00	6428	4000	21791	13560	3.39
8	[A2-M2] S	4.00	7977	4000	21325	10694	2.67

### Simbologia adottata

$n^\circ$	Indice della combinazione/fase
Tipo	Tipo della Combinazione/Fase
$\sigma_c$	tensione massima nel calcestruzzo, espressa in [kg/cm <sup>2</sup> ]
$Y(\sigma_c)$	ordinata della sezione con tensione massima nel calcestruzzo, espressa in [m]
$\sigma_{fi}$	tensione massima nei ferri (lato valle), espressa in [kg/cm <sup>2</sup> ]
$Y(\sigma_{fi})$	ordinata della sezione con tensione massima nei ferri (lato valle), espressa in [m]
$\sigma_{fs}$	tensione massima nei ferri (lato monte), espressa in [kg/cm <sup>2</sup> ]
$Y(\sigma_{fs})$	ordinata della sezione con tensione massima nei ferri (lato monte), espressa in [m]
$\tau_f$	tensione tangenziale massima nel calcestruzzo, espressa in [kg/cm <sup>2</sup> ]
$Y(\tau_c)$	ordinata della sezione con tensione tangenziale massima nel calcestruzzo, espressa in [m]

$n^\circ$	Tipo	$\sigma_c$	$Y(\sigma_c)$	$\sigma_{fi}$	$Y(\sigma_{fi})$	$\sigma_{fs}$	$Y(\sigma_{fs})$	$\tau_c$	$Y(\tau_c)$
9	[SLEQ]	30.60	4.00	0.00	0.00	1129.37	4.00	1.39	4.00
10	[SLEF]	34.07	4.00	0.00	0.00	1274.92	4.00	1.50	4.00
11	[SLER]	39.83	4.00	0.00	0.00	1517.56	4.00	1.68	4.00
12	[SLEQ] S	32.02	4.00	0.00	0.00	1189.02	4.00	1.45	4.00
13	[SLEF] S	35.60	4.00	0.00	0.00	1339.30	4.00	1.57	4.00
14	[SLER] S	41.55	4.00	0.00	0.00	1589.82	4.00	1.76	4.00

## Verifica armatura muro (Inviluppo)

### Simbologia adottata

$n^\circ$	Indice della Combinazione/Fase
Tipo	Tipo della Combinazione/Fase
$Y$	ordinata della sezione con fattore di sicurezza minimo, espressa in [m]
$M$	momento flettente, espresso in [kgm]
$N$	sforzo normale, espresso in [kg] (positivo di compressione)
$Mu$	momento ultimo di riferimento, espresso in [kgm]
$Nu$	sforzo normale ultimo di riferimento, espresso in [kg]
$FS$	fattore di sicurezza (rapporto fra la sollecitazione ultima e la sollecitazione di esercizio)

$n^\circ$	Tipo	$Y$	$M$	$N$	$Mu$	$Nu$	$FS$
4	[A2-M2]	0.05	1	50	6550	561966	11239.32
4	[A2-M2]	0.10	2	100	13074	551242	5512.42
4	[A2-M2]	0.15	5	150	19631	540463	3603.09
4	[A2-M2]	0.20	10	200	25570	516862	2584.31
4	[A2-M2]	0.25	16	250	30268	479220	1916.88
4	[A2-M2]	0.30	23	300	34261	442729	1475.76
4	[A2-M2]	0.35	32	350	37598	408057	1165.88
4	[A2-M2]	0.40	43	400	40365	375761	939.40
4	[A2-M2]	0.45	55	450	42647	346069	769.04
4	[A2-M2]	0.50	70	500	44520	318981	637.96
4	[A2-M2]	0.55	86	550	45936	293656	533.92
4	[A2-M2]	0.60	104	600	46925	269967	449.94
4	[A2-M2]	0.65	125	650	46471	242379	372.89
4	[A2-M2]	0.70	147	700	45551	216740	309.63
4	[A2-M2]	0.75	172	750	44404	193796	258.40
4	[A2-M2]	0.80	199	800	42815	172215	215.27
4	[A2-M2]	0.85	228	850	41423	154205	181.42
4	[A2-M2]	0.90	260	900	39693	137269	152.52
4	[A2-M2]	0.95	295	950	38223	123213	129.70
4	[A2-M2]	1.00	332	1000	36819	110966	110.97
4	[A2-M2]	1.05	372	1050	35230	99544	94.80
4	[A2-M2]	1.10	414	1100	33910	90055	81.87
4	[A2-M2]	1.15	460	1150	32797	82052	71.35
4	[A2-M2]	1.20	508	1200	31802	75112	62.59
4	[A2-M2]	1.25	559	1250	30764	68731	54.99
4	[A2-M2]	1.30	614	1300	29871	63242	48.65
4	[A2-M2]	1.35	672	1350	29096	58474	43.31
4	[A2-M2]	1.40	733	1400	28416	54294	38.78
4	[A2-M2]	1.45	797	1450	27816	50604	34.90
4	[A2-M2]	1.50	865	1500	27282	47324	31.55
4	[A2-M2]	1.55	936	1550	26805	44390	28.64
4	[A2-M2]	1.60	1011	1600	26376	41751	26.09
4	[A2-M2]	1.65	1089	1650	25988	39368	23.86
4	[A2-M2]	1.70	1171	1700	25636	37204	21.88
4	[A2-M2]	1.75	1257	1750	25316	35233	20.13
4	[A2-M2]	1.80	1347	1800	25023	33430	18.57
4	[A2-M2]	1.85	1441	1850	24754	31776	17.18
4	[A2-M2]	1.90	1539	1900	24506	30253	15.92
4	[A2-M2]	1.95	1641	1950	24277	28847	14.79
4	[A2-M2]	2.00	1747	2000	24066	27546	13.77
4	[A2-M2]	2.05	1858	2050	23869	26338	12.85
4	[A2-M2]	2.10	1973	2100	23686	25215	12.01



4	[A2-M2]	2.15	2092	2150	23516	24168	11.24
4	[A2-M2]	2.20	2216	2200	23357	23190	10.54
4	[A2-M2]	2.25	2344	2250	23208	22275	9.90
4	[A2-M2]	2.30	2477	2300	23069	21417	9.31
4	[A2-M2]	2.35	2615	2350	22938	20612	8.77
4	[A2-M2]	2.40	2758	2400	22814	19854	8.27
4	[A2-M2]	2.45	2906	2450	22698	19140	7.81
4	[A2-M2]	2.50	3058	2500	22589	18466	7.39
4	[A2-M2]	2.55	3216	2550	22485	17830	6.99
4	[A2-M2]	2.60	3379	2600	22387	17228	6.63
4	[A2-M2]	2.65	3547	2650	22295	16659	6.29
4	[A2-M2]	2.70	3720	2700	22207	16118	5.97
4	[A2-M2]	2.75	3899	2750	22123	15605	5.67
4	[A2-M2]	2.80	4083	2800	22044	15118	5.40
4	[A2-M2]	2.85	4273	2850	21969	14654	5.14
4	[A2-M2]	2.90	4468	2900	21897	14213	4.90
4	[A2-M2]	2.95	4669	2950	21829	13792	4.68
4	[A2-M2]	3.00	4876	3000	21763	13391	4.46
4	[A2-M2]	3.05	5088	3050	21701	13007	4.26
4	[A2-M2]	3.10	5307	3100	21641	12641	4.08
4	[A2-M2]	3.15	5532	3150	21584	12291	3.90
4	[A2-M2]	3.20	5762	3200	21530	11956	3.74
4	[A2-M2]	3.25	5999	3250	21478	11635	3.58
4	[A2-M2]	3.30	6242	3300	21428	11327	3.43
4	[A2-M2]	3.35	6492	3350	21380	11032	3.29
4	[A2-M2]	3.40	6748	3400	21334	10749	3.16
4	[A2-M2]	3.45	7010	3450	21289	10477	3.04
4	[A2-M2]	3.50	7279	3500	21247	10216	2.92
4	[A2-M2]	3.55	7555	3550	21206	9965	2.81
4	[A2-M2]	3.60	7837	3600	21167	9723	2.70
4	[A2-M2]	3.65	8126	3650	21129	9491	2.60
4	[A2-M2]	3.70	8422	3700	21093	9267	2.50
4	[A2-M2]	3.75	8725	3750	21057	9051	2.41
4	[A2-M2]	3.80	9035	3800	21024	8842	2.33
4	[A2-M2]	3.85	9352	3850	20991	8642	2.24
4	[A2-M2]	3.90	9676	3900	20959	8448	2.17
4	[A2-M2]	3.95	10008	3950	20929	8261	2.09
4	[A2-M2]	4.00	10347	4000	20899	8080	2.02

*Simbologia adottata*

$n^\circ$  *Indice della combinazione/fase*

Tipo *Tipo della Combinazione/Fase*

$Y$  *ordinata della sezione, espressa in [m]*

$\sigma_c$  *tensione massima nel calcestruzzo, espressa in [kg/cmq]*

$\sigma_{fi}$  *tensione massima nei ferri (lato valle), espressa in [kg/cmq]*

$\sigma_{fs}$  *tensione massima nei ferri (lato monte), espressa in [kg/cmq]*

$\tau_f$  *tensione tangenziale massima nel calcestruzzo, espressa in [kg/cmq]*

$Y$	$\sigma_c$	$n^\circ$ - Tipo	$\sigma_{fi}$	$n^\circ$ - Tipo	$\sigma_{fs}$	$n^\circ$ - Tipo	$\tau_c$	$n^\circ$ - Tipo
0.05	0.0114	- [SLER] S	0.00	1 - [A1-M1]	0.00	1 - [A1-M1]	0.0014	- [SLER] S
0.10	0.0314	- [SLER] S	0.00	1 - [A1-M1]	0.00	1 - [A1-M1]	0.0114	- [SLER] S
0.15	0.0414	- [SLER] S	0.00	1 - [A1-M1]	0.00	1 - [A1-M1]	0.0214	- [SLER] S
0.20	0.0614	- [SLER] S	0.00	1 - [A1-M1]	0.00	1 - [A1-M1]	0.0214	- [SLER] S
0.25	0.0914	- [SLER] S	0.00	1 - [A1-M1]	0.00	1 - [A1-M1]	0.0314	- [SLER] S
0.30	0.1114	- [SLER] S	0.00	1 - [A1-M1]	0.00	1 - [A1-M1]	0.0414	- [SLER] S

0.35	0.1414 - [SLER] S	0.00 1 - [A1-M1]	0.00 1 - [A1-M1]	0.0414 - [SLER] S
0.40	0.1814 - [SLER] S	0.00 1 - [A1-M1]	0.00 1 - [A1-M1]	0.0514 - [SLER] S
0.45	0.2214 - [SLER] S	0.00 1 - [A1-M1]	0.00 1 - [A1-M1]	0.0614 - [SLER] S
0.50	0.2614 - [SLER] S	0.00 1 - [A1-M1]	0.1214 - [SLER] S	0.0714 - [SLER] S
0.55	0.3114 - [SLER] S	0.00 1 - [A1-M1]	0.5614 - [SLER] S	0.0814 - [SLER] S
0.60	0.3714 - [SLER] S	0.00 1 - [A1-M1]	1.2214 - [SLER] S	0.0914 - [SLER] S
0.65	0.4414 - [SLER] S	0.00 1 - [A1-M1]	2.1614 - [SLER] S	0.1014 - [SLER] S
0.70	0.5214 - [SLER] S	0.00 1 - [A1-M1]	3.4214 - [SLER] S	0.1114 - [SLER] S
0.75	0.6114 - [SLER] S	0.00 1 - [A1-M1]	5.0614 - [SLER] S	0.1214 - [SLER] S
0.80	0.7214 - [SLER] S	0.00 1 - [A1-M1]	7.0914 - [SLER] S	0.1314 - [SLER] S
0.85	0.8314 - [SLER] S	0.00 1 - [A1-M1]	9.5414 - [SLER] S	0.1414 - [SLER] S
0.90	0.9514 - [SLER] S	0.00 1 - [A1-M1]	12.4314 - [SLER] S	0.1514 - [SLER] S
0.95	1.0914 - [SLER] S	0.00 1 - [A1-M1]	15.7714 - [SLER] S	0.1714 - [SLER] S
1.00	1.2314 - [SLER] S	0.00 1 - [A1-M1]	19.5714 - [SLER] S	0.1814 - [SLER] S
1.05	1.3914 - [SLER] S	0.00 1 - [A1-M1]	23.8414 - [SLER] S	0.1914 - [SLER] S
1.10	1.5514 - [SLER] S	0.00 1 - [A1-M1]	28.5914 - [SLER] S	0.2114 - [SLER] S
1.15	1.7314 - [SLER] S	0.00 1 - [A1-M1]	33.8214 - [SLER] S	0.2214 - [SLER] S
1.20	1.9214 - [SLER] S	0.00 1 - [A1-M1]	39.5614 - [SLER] S	0.2414 - [SLER] S
1.25	2.1214 - [SLER] S	0.00 1 - [A1-M1]	45.8214 - [SLER] S	0.2514 - [SLER] S
1.30	2.3414 - [SLER] S	0.00 1 - [A1-M1]	52.6014 - [SLER] S	0.2714 - [SLER] S
1.35	2.5714 - [SLER] S	0.00 1 - [A1-M1]	59.9214 - [SLER] S	0.2814 - [SLER] S
1.40	2.8114 - [SLER] S	0.00 1 - [A1-M1]	67.7914 - [SLER] S	0.3014 - [SLER] S
1.45	3.0614 - [SLER] S	0.00 1 - [A1-M1]	76.2314 - [SLER] S	0.3214 - [SLER] S
1.50	3.3314 - [SLER] S	0.00 1 - [A1-M1]	85.2514 - [SLER] S	0.3314 - [SLER] S
1.55	3.6114 - [SLER] S	0.00 1 - [A1-M1]	94.8614 - [SLER] S	0.3514 - [SLER] S
1.60	3.9014 - [SLER] S	0.00 1 - [A1-M1]	105.0814 - [SLER] S	0.3714 - [SLER] S
1.65	4.2114 - [SLER] S	0.00 1 - [A1-M1]	115.9214 - [SLER] S	0.3914 - [SLER] S
1.70	4.5314 - [SLER] S	0.00 1 - [A1-M1]	127.3914 - [SLER] S	0.4114 - [SLER] S
1.75	4.8714 - [SLER] S	0.00 1 - [A1-M1]	139.5114 - [SLER] S	0.4314 - [SLER] S
1.80	5.2314 - [SLER] S	0.00 1 - [A1-M1]	152.3014 - [SLER] S	0.4514 - [SLER] S
1.85	5.6014 - [SLER] S	0.00 1 - [A1-M1]	165.7614 - [SLER] S	0.4714 - [SLER] S
1.90	5.9914 - [SLER] S	0.00 1 - [A1-M1]	179.9214 - [SLER] S	0.4914 - [SLER] S
1.95	6.3914 - [SLER] S	0.00 1 - [A1-M1]	194.7814 - [SLER] S	0.5114 - [SLER] S
2.00	6.8114 - [SLER] S	0.00 1 - [A1-M1]	210.3614 - [SLER] S	0.5314 - [SLER] S
2.05	7.2514 - [SLER] S	0.00 1 - [A1-M1]	226.6814 - [SLER] S	0.5514 - [SLER] S
2.10	7.7114 - [SLER] S	0.00 1 - [A1-M1]	243.7514 - [SLER] S	0.5814 - [SLER] S
2.15	8.1814 - [SLER] S	0.00 1 - [A1-M1]	261.5714 - [SLER] S	0.6014 - [SLER] S
2.20	8.6814 - [SLER] S	0.00 1 - [A1-M1]	280.1814 - [SLER] S	0.6214 - [SLER] S
2.25	9.1914 - [SLER] S	0.00 1 - [A1-M1]	299.5814 - [SLER] S	0.6514 - [SLER] S
2.30	9.7214 - [SLER] S	0.00 1 - [A1-M1]	319.7814 - [SLER] S	0.6714 - [SLER] S
2.35	10.2714 - [SLER] S	0.00 1 - [A1-M1]	340.8114 - [SLER] S	0.7014 - [SLER] S
2.40	10.8414 - [SLER] S	0.00 1 - [A1-M1]	362.6714 - [SLER] S	0.7214 - [SLER] S
2.45	11.4314 - [SLER] S	0.00 1 - [A1-M1]	385.3814 - [SLER] S	0.7514 - [SLER] S
2.50	12.0414 - [SLER] S	0.00 1 - [A1-M1]	408.9514 - [SLER] S	0.7714 - [SLER] S
2.55	12.6714 - [SLER] S	0.00 1 - [A1-M1]	433.4114 - [SLER] S	0.8014 - [SLER] S
2.60	13.3214 - [SLER] S	0.00 1 - [A1-M1]	458.7514 - [SLER] S	0.8314 - [SLER] S
2.65	13.9914 - [SLER] S	0.00 1 - [A1-M1]	485.0114 - [SLER] S	0.8514 - [SLER] S
2.70	14.6914 - [SLER] S	0.00 1 - [A1-M1]	512.1814 - [SLER] S	0.8814 - [SLER] S
2.75	15.4114 - [SLER] S	0.00 1 - [A1-M1]	540.3014 - [SLER] S	0.9114 - [SLER] S
2.80	16.1514 - [SLER] S	0.00 1 - [A1-M1]	569.3614 - [SLER] S	0.9414 - [SLER] S
2.85	16.9114 - [SLER] S	0.00 1 - [A1-M1]	599.3914 - [SLER] S	0.9714 - [SLER] S
2.90	17.7014 - [SLER] S	0.00 1 - [A1-M1]	630.4014 - [SLER] S	1.0014 - [SLER] S
2.95	18.5014 - [SLER] S	0.00 1 - [A1-M1]	662.4014 - [SLER] S	1.0314 - [SLER] S
3.00	19.3414 - [SLER] S	0.00 1 - [A1-M1]	695.4114 - [SLER] S	1.0614 - [SLER] S
3.05	20.2014 - [SLER] S	0.00 1 - [A1-M1]	729.4514 - [SLER] S	1.0914 - [SLER] S
3.10	21.0814 - [SLER] S	0.00 1 - [A1-M1]	764.5214 - [SLER] S	1.1214 - [SLER] S
3.15	21.9914 - [SLER] S	0.00 1 - [A1-M1]	800.6414 - [SLER] S	1.1514 - [SLER] S

3.20	22.9214 - [SLER] S	0.00	1 - [A1-M1]	837.8414 - [SLER] S	1.1914 - [SLER] S
3.25	23.8814 - [SLER] S	0.00	1 - [A1-M1]	876.1114 - [SLER] S	1.2214 - [SLER] S
3.30	24.8614 - [SLER] S	0.00	1 - [A1-M1]	915.4814 - [SLER] S	1.2514 - [SLER] S
3.35	25.8714 - [SLER] S	0.00	1 - [A1-M1]	955.9614 - [SLER] S	1.2914 - [SLER] S
3.40	26.9114 - [SLER] S	0.00	1 - [A1-M1]	997.5614 - [SLER] S	1.3214 - [SLER] S
3.45	27.9714 - [SLER] S	0.00	1 - [A1-M1]	1040.3114 - [SLER] S	1.3514 - [SLER] S
3.50	29.0614 - [SLER] S	0.00	1 - [A1-M1]	1084.2014 - [SLER] S	1.3914 - [SLER] S
3.55	30.1814 - [SLER] S	0.00	1 - [A1-M1]	1129.2714 - [SLER] S	1.4214 - [SLER] S
3.60	31.3314 - [SLER] S	0.00	1 - [A1-M1]	1175.5214 - [SLER] S	1.4614 - [SLER] S
3.65	32.5014 - [SLER] S	0.00	1 - [A1-M1]	1222.9614 - [SLER] S	1.5014 - [SLER] S
3.70	33.7114 - [SLER] S	0.00	1 - [A1-M1]	1271.6214 - [SLER] S	1.5314 - [SLER] S
3.75	34.9414 - [SLER] S	0.00	1 - [A1-M1]	1321.5114 - [SLER] S	1.5714 - [SLER] S
3.80	36.2014 - [SLER] S	0.00	1 - [A1-M1]	1372.6314 - [SLER] S	1.6114 - [SLER] S
3.85	37.4914 - [SLER] S	0.00	1 - [A1-M1]	1425.0114 - [SLER] S	1.6414 - [SLER] S
3.90	38.8214 - [SLER] S	0.00	1 - [A1-M1]	1478.6614 - [SLER] S	1.6814 - [SLER] S
3.95	40.1714 - [SLER] S	0.00	1 - [A1-M1]	1533.5914 - [SLER] S	1.7214 - [SLER] S
4.00	41.5514 - [SLER] S	0.00	1 - [A1-M1]	1589.8214 - [SLER] S	1.7614 - [SLER] S

### Descrizione armatura micropali e caratteristiche sezione

Diametro del micropalo	30.00	cm
Area della sezione trasversale	706.86	cmq
Diametro esterno del tubolare	219.10	mm
Spessore del tubolare	8.00	mm
Area della sezione tubolare	53.06	cmq
Inerzia della sezione tubolare	2959.63	cm <sup>4</sup>

## Verifica armatura paratia (Sezioni critiche)

### Simbologia adottata

$n^\circ$	Indice della combinazione/fase
Tipo	Tipo della Combinazione/Fase
$Y$	ordinata della sezione rispetto alla testa della paratia espressa in [m]
$M$	momento flettente espresso in [kgm]
$N$	sforzo normale espresso in [kg] (positivo di compressione)
$Mu$	momento ultimo di riferimento espresso in [kgm]
$Nu$	sforzo normale ultimo di riferimento espresso in [kg]
$FS$	fattore di sicurezza (rapporto fra la sollecitazione ultima e la sollecitazione di esercizio)

$n^\circ$	Tipo	$Y$	$M$	$N$	$Mu$	$Nu$	$FS$
1	[A1-M1]	4.00	6974	4000	21600	12390	3.10
2	[A2-M2]	4.00	6713	4000	21687	12923	3.23
3	[A1-M1]	4.00	10325	4000	20902	8098	2.02
4	[A2-M2]	4.00	10347	4000	20899	8080	2.02
5	[A1-M1] S	4.00	5949	4000	21990	14787	3.70
6	[A2-M2] S	4.00	7380	4000	21479	11641	2.91
7	[A1-M1] S	4.00	6428	4000	21791	13560	3.39
8	[A2-M2] S	4.00	7977	4000	21325	10694	2.67

### Simbologia adottata

$n^\circ$	Indice della combinazione/fase
Tipo	Tipo della Combinazione/Fase
$Y$	ordinata della sezione rispetto alla testa della paratia espressa in [m]
$\sigma_{id}$	tensione ideale nell'acciaio, espressa in [kg/cm <sup>2</sup> ]
$\tau_f$	tensione tangenziale nel calcestruzzo, espresso in [kg/cm <sup>2</sup> ]

$n^\circ$	Tipo	$\sigma_{id}$	$Y(\sigma_{id})$	$\sigma_f$	$Y(\sigma_f)$	$\tau_f$	$Y(\tau_f)$
9	[SLEQ]	931.10	5.00	931.09	5.00	45.16	4.05
10	[SLEF]	1036.61	5.05	1036.60	5.05	49.04	4.05
11	[SLER]	1231.01	5.10	1231.01	5.10	55.51	4.05
12	[SLEQ] S	985.44	5.05	985.44	5.05	47.57	4.05
13	[SLEF] S	1096.25	5.05	1096.25	5.05	51.64	4.05
14	[SLER] S	1300.43	5.15	1300.43	5.15	58.43	4.05

## Verifica armatura paratia (Inviluppo)

### Simbologia adottata

<i>n°</i>	<i>Indice della Combinazione/Fase</i>
<i>Tipo</i>	<i>Tipo della Combinazione/Fase</i>
<i>Y</i>	<i>ordinata della sezione con fattore di sicurezza minimo, espressa in [m]</i>
<i>M</i>	<i>momento flettente, espresso in [kgm]</i>
<i>N</i>	<i>sforzo normale, espresso in [kg] (positivo di compressione)</i>
<i>Mu</i>	<i>momento ultimo di riferimento, espresso in [kgm]</i>
<i>Nu</i>	<i>sforzo normale ultimo di riferimento, espresso in [kg]</i>
<i>FS</i>	<i>fattore di sicurezza (rapporto fra la sollecitazione ultima e la sollecitazione di esercizio)</i>

<b>n°</b>	<b>Tipo</b>	<b>Y</b>	<b>M</b>	<b>N</b>	<b>Mu</b>	<b>Nu</b>	<b>FS</b>
4	[A2-M2]	4.00	10347	4000	20899	8080	2.02
4	[A2-M2]	4.05	10686	4225	15453	6109	4.72
4	[A2-M2]	4.10	11017	4450	15453	6242	4.58
4	[A2-M2]	4.15	11338	4675	15454	6372	4.45
4	[A2-M2]	4.20	11649	4900	15455	6501	4.33
4	[A2-M2]	4.25	11949	5125	15455	6629	4.23
4	[A2-M2]	4.30	12240	5350	15456	6756	4.13
4	[A2-M2]	4.35	12520	5575	15457	6883	4.03
4	[A2-M2]	4.40	12792	5800	15457	7009	3.95
4	[A2-M2]	4.45	13059	6025	15458	7132	3.87
4	[A2-M2]	4.50	13324	6250	15459	7251	3.79
4	[A2-M2]	4.55	13587	6475	15459	7367	3.72
4	[A2-M2]	4.60	13846	6700	15460	7481	3.65
4	[A2-M2]	4.65	14102	6925	15460	7592	3.58
4	[A2-M2]	4.70	14353	6954	15460	7490	3.52
4	[A2-M2]	4.75	14599	6983	15459	7394	3.46
4	[A2-M2]	4.80	14839	7012	15459	7305	3.40
4	[A2-M2]	4.85	15070	7040	15459	7222	3.35
4	[A2-M2]	4.90	15290	7069	15458	7147	3.30
4	[A2-M2]	4.95	15498	7098	15458	7080	3.26
4	[A2-M2]	5.00	15693	7127	15457	7020	3.22
4	[A2-M2]	5.05	15877	7156	15457	6967	3.18
4	[A2-M2]	5.10	16047	7185	15457	6920	3.15
4	[A2-M2]	5.15	16205	7214	15457	6880	3.12
4	[A2-M2]	5.20	16351	7242	15457	6846	3.09
4	[A2-M2]	5.25	16484	7271	15456	6818	3.06
4	[A2-M2]	5.30	16604	7300	15456	6795	3.04
4	[A2-M2]	5.35	16712	7329	15456	6778	3.02
4	[A2-M2]	5.40	16807	7358	15456	6766	3.00
4	[A2-M2]	5.45	16890	7387	15456	6760	2.99
4	[A2-M2]	5.50	16959	7416	15456	6758	2.98
4	[A2-M2]	5.55	17016	7445	15456	6762	2.97
4	[A2-M2]	5.60	17060	7473	15456	6771	2.96
4	[A2-M2]	5.65	17090	7502	15456	6785	2.95
4	[A2-M2]	5.70	17108	7531	15456	6804	2.95
4	[A2-M2]	5.75	17113	7560	15456	6828	2.95
4	[A2-M2]	5.80	17105	7589	15457	6858	2.95
4	[A2-M2]	5.85	17084	7618	15457	6892	2.96
4	[A2-M2]	5.90	17049	7647	15457	6933	2.96
4	[A2-M2]	5.95	17002	7675	15457	6978	2.97
4	[A2-M2]	6.00	16941	7704	15458	7030	2.98
4	[A2-M2]	6.05	16866	7733	15458	7087	2.99

4	[A2-M2]	6.10	16779	7762	15458	7151	3.01
4	[A2-M2]	6.15	16678	7791	15459	7221	3.03
4	[A2-M2]	6.20	16564	7820	15459	7298	3.05
4	[A2-M2]	6.25	16437	7849	15459	7382	3.07
4	[A2-M2]	6.30	16298	7877	15460	7472	3.10
4	[A2-M2]	6.35	16148	7906	15460	7570	3.13
4	[A2-M2]	6.40	15987	7935	15461	7674	3.16
4	[A2-M2]	6.45	15816	7964	15461	7785	3.19
4	[A2-M2]	6.50	15637	7993	15462	7904	3.23
4	[A2-M2]	6.55	15448	8022	15463	8029	3.27
4	[A2-M2]	6.60	15252	8051	15463	8162	3.31
4	[A2-M2]	6.65	15048	8080	15464	8303	3.36
4	[A2-M2]	6.70	14837	8108	15465	8452	3.40
4	[A2-M2]	6.75	14620	8137	15466	8608	3.46
4	[A2-M2]	6.80	14397	8166	15467	8773	3.51
4	[A2-M2]	6.85	14168	8195	15467	8947	3.57
4	[A2-M2]	6.90	13935	8224	15468	9129	3.63
4	[A2-M2]	6.95	13697	8253	15469	9321	3.69
4	[A2-M2]	7.00	13455	8282	15470	9522	3.76
4	[A2-M2]	7.05	13202	8310	15472	9739	3.83
4	[A2-M2]	7.10	12934	8339	15473	9976	3.91
4	[A2-M2]	7.15	12652	8368	15474	10235	4.00
4	[A2-M2]	7.20	12358	8397	15476	10515	4.09
4	[A2-M2]	7.25	12054	8426	15477	10819	4.19
4	[A2-M2]	7.30	11740	8455	15479	11147	4.31
4	[A2-M2]	7.35	11419	8484	15481	11501	4.43
4	[A2-M2]	7.40	11092	8512	15483	11882	4.56
4	[A2-M2]	7.45	10759	8541	15485	12293	4.70
4	[A2-M2]	7.50	10423	8570	15487	12734	4.85
4	[A2-M2]	7.55	10084	8599	15490	13208	5.02
4	[A2-M2]	7.60	9744	8628	15492	13718	5.19
4	[A2-M2]	7.65	9402	8657	15495	14266	5.38
4	[A2-M2]	7.70	9062	8686	15498	14855	5.59
4	[A2-M2]	7.75	8722	8715	15501	15489	5.81
4	[A2-M2]	7.80	8384	8743	15505	16170	6.04
4	[A2-M2]	7.85	8048	8772	15509	16904	6.29
4	[A2-M2]	7.90	7716	8801	15513	17694	6.57
4	[A2-M2]	7.95	7388	8830	15517	18545	6.86
4	[A2-M2]	8.00	7065	8859	15522	19464	7.18
4	[A2-M2]	8.05	6746	8888	15527	20457	7.52
4	[A2-M2]	8.10	6433	8917	15533	21530	7.89
4	[A2-M2]	8.15	6126	8945	15539	22692	8.29
4	[A2-M2]	8.20	5825	8974	15545	23951	8.72
4	[A2-M2]	8.25	5530	9003	15553	25319	9.19
4	[A2-M2]	8.30	5243	9032	15560	26806	9.70
4	[A2-M2]	8.35	4963	9061	15569	28426	10.25
4	[A2-M2]	8.40	4690	9090	15578	30194	10.85
4	[A2-M2]	8.45	4424	9119	15588	32126	11.51
4	[A2-M2]	8.50	4167	9147	15599	34244	12.23
4	[A2-M2]	8.55	3917	9176	15611	36570	13.02
4	[A2-M2]	8.60	3676	9205	15623	39127	13.89
4	[A2-M2]	8.65	3442	9234	15579	41794	14.79
4	[A2-M2]	8.70	3217	9263	15530	44722	15.77
4	[A2-M2]	8.75	2999	9292	15476	47945	16.86
4	[A2-M2]	8.80	2790	9321	15416	51500	18.05
4	[A2-M2]	8.85	2589	9350	15350	55433	19.37
4	[A2-M2]	8.90	2396	9378	15257	59716	20.80

4	[A2-M2]	8.95	2211	9407	15095	64216	22.30
4	[A2-M2]	9.00	2034	9436	14916	69182	23.95
4	[A2-M2]	9.05	1866	9465	14718	74672	25.77
4	[A2-M2]	9.10	1704	9494	14485	80682	27.76
4	[A2-M2]	9.15	1551	9523	14208	87228	29.92
4	[A2-M2]	9.20	1405	9552	13901	94481	32.31
4	[A2-M2]	9.25	1267	9580	13555	102496	34.95
4	[A2-M2]	9.30	1136	9609	13168	111375	37.86
4	[A2-M2]	9.35	1012	9638	12729	121194	41.08
4	[A2-M2]	9.40	896	9667	12231	132020	44.61
4	[A2-M2]	9.45	786	9696	11666	143959	48.50
4	[A2-M2]	9.50	683	9725	11028	157133	52.78
4	[A2-M2]	9.55	586	9754	10292	171328	57.38
4	[A2-M2]	9.60	496	9782	9454	186617	62.32
4	[A2-M2]	9.65	411	9811	8508	202861	67.54
4	[A2-M2]	9.70	333	9840	7446	219780	72.96
4	[A2-M2]	9.75	261	9869	6270	237027	78.46
3	[A1-M1]	9.80	-220	9898	-5493	247590	81.71
3	[A1-M1]	9.85	-241	9927	-5875	242391	79.77
3	[A1-M1]	9.90	-259	9956	-6189	238118	78.13
3	[A1-M1]	9.95	-274	9985	-6445	234645	76.77
3	[A1-M1]	10.00	-287	10013	-6644	231705	75.59
3	[A1-M1]	10.05	-298	10042	-6798	229417	74.63
3	[A1-M1]	10.10	-306	10071	-6912	227721	73.86
3	[A1-M1]	10.15	-312	10100	-6990	226558	73.28
3	[A1-M1]	10.20	-315	10129	-7036	225879	72.85
3	[A1-M1]	10.25	-317	10158	-7051	225642	72.57
3	[A1-M1]	10.30	-318	10187	-7040	225814	72.41
3	[A1-M1]	10.35	-316	10215	-7003	226366	72.39
3	[A1-M1]	10.40	-313	10244	-6942	227272	72.47
3	[A1-M1]	10.45	-308	10273	-6858	228513	72.66
3	[A1-M1]	10.50	-302	10302	-6754	230070	72.95
3	[A1-M1]	10.55	-295	10331	-6629	231926	73.34
3	[A1-M1]	10.60	-287	10360	-6485	234067	73.81
3	[A1-M1]	10.65	-278	10389	-6319	236352	74.32
3	[A1-M1]	10.70	-268	10417	-6135	238853	74.90
4	[A2-M2]	10.75	-263	10446	-6042	240123	75.09
4	[A2-M2]	10.80	-257	10475	-5937	241555	75.33
4	[A2-M2]	10.85	-250	10504	-5801	243395	75.69
4	[A2-M2]	10.90	-242	10533	-5638	245617	76.18
4	[A2-M2]	10.95	-232	10562	-5448	248197	76.77
4	[A2-M2]	11.00	-221	10591	-5234	251112	77.46
4	[A2-M2]	11.05	-209	10620	-4996	254325	78.23
4	[A2-M2]	11.10	-196	10648	-4735	257702	79.06
4	[A2-M2]	11.15	-182	10677	-4455	261328	79.95
4	[A2-M2]	11.20	-168	10706	-4158	265174	80.91
4	[A2-M2]	11.25	-153	10735	-3847	269210	81.92
4	[A2-M2]	11.30	-139	10764	-3523	273404	82.97
4	[A2-M2]	11.35	-124	10793	-3164	275467	83.38
4	[A2-M2]	11.40	-109	10822	-2803	277470	83.76
4	[A2-M2]	11.45	-95	10850	-2447	279454	84.13
4	[A2-M2]	11.50	-81	10879	-2098	281395	84.49
4	[A2-M2]	11.55	-68	10908	-1760	283270	84.83
4	[A2-M2]	11.60	-55	10937	-1439	285056	85.14
4	[A2-M2]	11.65	-44	10966	-1139	286727	85.41
4	[A2-M2]	11.70	-33	10995	-864	288257	85.64
4	[A2-M2]	11.75	-24	11024	-618	289621	85.82

4	[A2-M2]	11.80	-15	11052	-408	290793	85.95
4	[A2-M2]	11.85	-9	11081	-236	291747	86.00
4	[A2-M2]	11.90	-4	11110	-108	292459	85.99
4	[A2-M2]	11.95	-1	11139	-28	292904	85.90

*Simbologia adottata*

$n^\circ$	Indice della combinazione/fase
Tipo	Tipo della Combinazione/Fase
Y	ordinata della sezione, espressa in [m]
$\sigma_c$	tensione massima nel calcestruzzo, espressa in [kg/cmq]
$\sigma_{id}$	tensione ideale nell'acciaio, espressa in [kg/cmq]
$\tau_f$	tensione tangenziale in [kg/cmq]

Y	$\sigma_{id}$ n° - Tipo	$\sigma_f$ n° - Tipo	$\tau_f$ n° - Tipo
4.00	41.5514 - [SLER] S	0.001 - [A1-M1]	1.7614 - [SLER] S
4.05	958.4414 - [SLER] S	953.0814 - [SLER] S	58.4314 - [SLER] S
4.10	987.7614 - [SLER] S	983.0714 - [SLER] S	55.5514 - [SLER] S
4.15	1015.7414 - [SLER] S	1011.6414 - [SLER] S	52.6214 - [SLER] S
4.20	1042.3314 - [SLER] S	1038.7714 - [SLER] S	49.6514 - [SLER] S
4.25	1067.5114 - [SLER] S	1064.4514 - [SLER] S	46.6314 - [SLER] S
4.30	1091.2514 - [SLER] S	1088.6414 - [SLER] S	43.5514 - [SLER] S
4.35	1113.5614 - [SLER] S	1111.3214 - [SLER] S	40.8314 - [SLER] S
4.40	1134.6114 - [SLER] S	1132.6614 - [SLER] S	38.4514 - [SLER] S
4.45	1154.5514 - [SLER] S	1152.8414 - [SLER] S	36.3014 - [SLER] S
4.50	1173.4714 - [SLER] S	1171.9614 - [SLER] S	34.3714 - [SLER] S
4.55	1191.4414 - [SLER] S	1190.1314 - [SLER] S	32.2714 - [SLER] S
4.60	1208.3914 - [SLER] S	1207.2714 - [SLER] S	29.9914 - [SLER] S
4.65	1224.2314 - [SLER] S	1223.2914 - [SLER] S	27.6814 - [SLER] S
4.70	1237.8214 - [SLER] S	1237.0514 - [SLER] S	25.3314 - [SLER] S
4.75	1250.2814 - [SLER] S	1249.6514 - [SLER] S	22.9514 - [SLER] S
4.80	1261.5814 - [SLER] S	1261.0814 - [SLER] S	20.5314 - [SLER] S
4.85	1271.7014 - [SLER] S	1271.3314 - [SLER] S	17.7814 - [SLER] S
4.90	1280.4714 - [SLER] S	1280.2214 - [SLER] S	14.6914 - [SLER] S
4.95	1287.7514 - [SLER] S	1287.6014 - [SLER] S	11.2614 - [SLER] S
5.00	1293.3614 - [SLER] S	1293.2914 - [SLER] S	7.7814 - [SLER] S
5.05	1297.3114 - [SLER] S	1297.2814 - [SLER] S	4.4614 - [SLER] S
5.10	1299.6414 - [SLER] S	1299.6414 - [SLER] S	5.389 - [SLEQ]
5.15	1300.4314 - [SLER] S	1300.4314 - [SLER] S	7.249 - [SLEQ]
5.20	1299.7614 - [SLER] S	1299.7314 - [SLER] S	9.019 - [SLEQ]
5.25	1297.6714 - [SLER] S	1297.6114 - [SLER] S	10.7110 - [SLEF]
5.30	1294.2514 - [SLER] S	1294.1314 - [SLER] S	12.5610 - [SLEF]
5.35	1289.5414 - [SLER] S	1289.3614 - [SLER] S	14.3110 - [SLEF]
5.40	1283.6214 - [SLER] S	1283.3614 - [SLER] S	15.9710 - [SLEF]
5.45	1276.5314 - [SLER] S	1276.1914 - [SLER] S	17.6311 - [SLER]
5.50	1268.3514 - [SLER] S	1267.9114 - [SLER] S	19.5811 - [SLER]
5.55	1259.1214 - [SLER] S	1258.5814 - [SLER] S	21.4311 - [SLER]
5.60	1248.9014 - [SLER] S	1248.2514 - [SLER] S	23.2914 - [SLER] S
5.65	1237.7514 - [SLER] S	1236.9814 - [SLER] S	25.1014 - [SLER] S
5.70	1225.7114 - [SLER] S	1224.8314 - [SLER] S	26.8114 - [SLER] S
5.75	1212.8314 - [SLER] S	1211.8314 - [SLER] S	28.4214 - [SLER] S
5.80	1199.1714 - [SLER] S	1198.0514 - [SLER] S	29.9314 - [SLER] S
5.85	1184.7614 - [SLER] S	1183.5214 - [SLER] S	31.3514 - [SLER] S
5.90	1169.6714 - [SLER] S	1168.3014 - [SLER] S	32.6714 - [SLER] S
5.95	1153.9214 - [SLER] S	1152.4214 - [SLER] S	33.9214 - [SLER] S
6.00	1137.5614 - [SLER] S	1135.9414 - [SLER] S	35.0714 - [SLER] S



6.05	1120.6314 - [SLER] S	1118.8814 - [SLER] S	36.1514 - [SLER] S
6.10	1103.1814 - [SLER] S	1101.3014 - [SLER] S	37.1514 - [SLER] S
6.15	1085.2314 - [SLER] S	1083.2314 - [SLER] S	38.0814 - [SLER] S
6.20	1066.8314 - [SLER] S	1064.7014 - [SLER] S	38.9314 - [SLER] S
6.25	1048.0114 - [SLER] S	1045.7514 - [SLER] S	39.7214 - [SLER] S
6.30	1028.8114 - [SLER] S	1026.4214 - [SLER] S	40.4414 - [SLER] S
6.35	1009.2414 - [SLER] S	1006.7314 - [SLER] S	41.1014 - [SLER] S
6.40	989.3614 - [SLER] S	986.7214 - [SLER] S	41.7014 - [SLER] S
6.45	969.1814 - [SLER] S	966.4114 - [SLER] S	42.2414 - [SLER] S
6.50	948.7314 - [SLER] S	945.8414 - [SLER] S	42.7314 - [SLER] S
6.55	928.0514 - [SLER] S	925.0314 - [SLER] S	43.1614 - [SLER] S
6.60	907.1514 - [SLER] S	904.0114 - [SLER] S	43.5514 - [SLER] S
6.65	886.0614 - [SLER] S	882.7914 - [SLER] S	43.8914 - [SLER] S
6.70	864.8014 - [SLER] S	861.4114 - [SLER] S	44.1814 - [SLER] S
6.75	843.4014 - [SLER] S	839.8814 - [SLER] S	44.4414 - [SLER] S
6.80	821.8814 - [SLER] S	818.2314 - [SLER] S	44.6514 - [SLER] S
6.85	800.2514 - [SLER] S	796.4814 - [SLER] S	44.8314 - [SLER] S
6.90	778.5414 - [SLER] S	774.6414 - [SLER] S	44.9714 - [SLER] S
6.95	756.7614 - [SLER] S	752.7314 - [SLER] S	45.0814 - [SLER] S
7.00	734.9614 - [SLER] S	730.7614 - [SLER] S	45.3014 - [SLER] S
7.05	713.0614 - [SLER] S	708.6914 - [SLER] S	45.5214 - [SLER] S
7.10	691.0414 - [SLER] S	686.5114 - [SLER] S	45.6114 - [SLER] S
7.15	668.9614 - [SLER] S	664.2814 - [SLER] S	45.5814 - [SLER] S
7.20	646.8814 - [SLER] S	642.0714 - [SLER] S	45.4414 - [SLER] S
7.25	624.8514 - [SLER] S	619.9314 - [SLER] S	45.2014 - [SLER] S
7.30	602.9314 - [SLER] S	597.9014 - [SLER] S	44.8514 - [SLER] S
7.35	581.1614 - [SLER] S	576.0514 - [SLER] S	44.4214 - [SLER] S
7.40	559.6014 - [SLER] S	554.4014 - [SLER] S	43.9114 - [SLER] S
7.45	538.2714 - [SLER] S	533.0214 - [SLER] S	43.3214 - [SLER] S
7.50	517.2214 - [SLER] S	511.9214 - [SLER] S	42.6614 - [SLER] S
7.55	496.4814 - [SLER] S	491.1414 - [SLER] S	41.9414 - [SLER] S
7.60	476.0814 - [SLER] S	470.7214 - [SLER] S	41.1614 - [SLER] S
7.65	456.0614 - [SLER] S	450.6814 - [SLER] S	40.3314 - [SLER] S
7.70	436.4314 - [SLER] S	431.0414 - [SLER] S	39.4614 - [SLER] S
7.75	417.2114 - [SLER] S	411.8414 - [SLER] S	38.5514 - [SLER] S
7.80	398.4414 - [SLER] S	393.0814 - [SLER] S	37.6014 - [SLER] S
7.85	380.1114 - [SLER] S	374.7814 - [SLER] S	36.6214 - [SLER] S
7.90	362.2614 - [SLER] S	356.9714 - [SLER] S	35.6214 - [SLER] S
7.95	344.8914 - [SLER] S	339.6514 - [SLER] S	34.6014 - [SLER] S
8.00	328.0214 - [SLER] S	322.8314 - [SLER] S	33.5614 - [SLER] S
8.05	311.6514 - [SLER] S	306.5214 - [SLER] S	32.5014 - [SLER] S
8.10	295.7914 - [SLER] S	290.7314 - [SLER] S	31.4414 - [SLER] S
8.15	280.4414 - [SLER] S	275.4614 - [SLER] S	30.3714 - [SLER] S
8.20	265.6114 - [SLER] S	260.7214 - [SLER] S	29.2914 - [SLER] S
8.25	251.3114 - [SLER] S	246.5114 - [SLER] S	28.2114 - [SLER] S
8.30	237.5214 - [SLER] S	232.8214 - [SLER] S	27.1414 - [SLER] S
8.35	224.2614 - [SLER] S	219.6714 - [SLER] S	26.0714 - [SLER] S
8.40	211.5214 - [SLER] S	207.0314 - [SLER] S	25.0114 - [SLER] S
8.45	199.2914 - [SLER] S	194.9214 - [SLER] S	23.9514 - [SLER] S
8.50	187.5714 - [SLER] S	183.3314 - [SLER] S	22.9114 - [SLER] S
8.55	176.3714 - [SLER] S	172.2514 - [SLER] S	21.8814 - [SLER] S
8.60	165.6614 - [SLER] S	161.6714 - [SLER] S	20.8614 - [SLER] S
8.65	155.4514 - [SLER] S	151.6014 - [SLER] S	19.8614 - [SLER] S
8.70	145.7314 - [SLER] S	142.0214 - [SLER] S	18.8814 - [SLER] S
8.75	136.4914 - [SLER] S	132.9114 - [SLER] S	17.9114 - [SLER] S
8.80	127.7114 - [SLER] S	124.2914 - [SLER] S	16.9614 - [SLER] S
8.85	119.4014 - [SLER] S	116.1314 - [SLER] S	16.0414 - [SLER] S

8.90	111.5414 - [SLER] S	108.4214 - [SLER] S	15.1314 - [SLER] S
8.95	104.1214 - [SLER] S	101.1614 - [SLER] S	14.2514 - [SLER] S
9.00	97.1414 - [SLER] S	94.3314 - [SLER] S	13.3914 - [SLER] S
9.05	90.5714 - [SLER] S	87.9214 - [SLER] S	12.5514 - [SLER] S
9.10	84.4114 - [SLER] S	81.9314 - [SLER] S	11.7414 - [SLER] S
9.15	78.6514 - [SLER] S	76.3314 - [SLER] S	10.9514 - [SLER] S
9.20	73.2814 - [SLER] S	71.1314 - [SLER] S	10.1814 - [SLER] S
9.25	68.2814 - [SLER] S	66.2914 - [SLER] S	9.4414 - [SLER] S
9.30	63.6514 - [SLER] S	61.8314 - [SLER] S	8.7214 - [SLER] S
9.35	63.179 - [SLEQ]	62.719 - [SLEQ]	8.0314 - [SLER] S
9.40	65.419 - [SLEQ]	65.049 - [SLEQ]	7.3614 - [SLER] S
9.45	67.459 - [SLEQ]	67.179 - [SLEQ]	6.7214 - [SLER] S
9.50	69.4010 - [SLEF]	69.109 - [SLEQ]	6.1014 - [SLER] S
9.55	71.3810 - [SLEF]	71.1410 - [SLEF]	5.5114 - [SLER] S
9.60	73.1710 - [SLEF]	72.9910 - [SLEF]	4.9414 - [SLER] S
9.65	74.7810 - [SLEF]	74.6410 - [SLEF]	4.3914 - [SLER] S
9.70	76.4811 - [SLER]	76.2511 - [SLER]	3.8714 - [SLER] S
9.75	78.2511 - [SLER]	78.0811 - [SLER]	3.3714 - [SLER] S
9.80	79.8614 - [SLER] S	79.7014 - [SLER] S	2.9014 - [SLER] S
9.85	81.4014 - [SLER] S	81.2914 - [SLER] S	2.4514 - [SLER] S
9.90	82.7314 - [SLER] S	82.6614 - [SLER] S	2.0214 - [SLER] S
9.95	83.8614 - [SLER] S	83.8214 - [SLER] S	1.6114 - [SLER] S
10.00	84.8014 - [SLER] S	84.7814 - [SLER] S	1.2314 - [SLER] S
10.05	85.5614 - [SLER] S	85.5514 - [SLER] S	0.8714 - [SLER] S
10.10	86.1414 - [SLER] S	86.1414 - [SLER] S	0.5314 - [SLER] S
10.15	86.5714 - [SLER] S	86.5714 - [SLER] S	0.349 - [SLEQ]
10.20	86.8314 - [SLER] S	86.8314 - [SLER] S	0.529 - [SLEQ]
10.25	86.9614 - [SLER] S	86.9514 - [SLER] S	0.689 - [SLEQ]
10.30	86.9414 - [SLER] S	86.9414 - [SLER] S	0.8410 - [SLEF]
10.35	86.8114 - [SLER] S	86.7914 - [SLER] S	1.0010 - [SLEF]
10.40	86.5514 - [SLER] S	86.5314 - [SLER] S	1.1410 - [SLEF]
10.45	86.1914 - [SLER] S	86.1614 - [SLER] S	1.3111 - [SLER]
10.50	85.7314 - [SLER] S	85.6914 - [SLER] S	1.4814 - [SLER] S
10.55	85.1714 - [SLER] S	85.1314 - [SLER] S	1.6514 - [SLER] S
10.60	84.5414 - [SLER] S	84.4814 - [SLER] S	1.8014 - [SLER] S
10.65	83.8314 - [SLER] S	83.7714 - [SLER] S	1.9314 - [SLER] S
10.70	83.0614 - [SLER] S	82.9814 - [SLER] S	2.0514 - [SLER] S
10.75	82.2314 - [SLER] S	82.1414 - [SLER] S	2.1514 - [SLER] S
10.80	81.3514 - [SLER] S	81.2614 - [SLER] S	2.2314 - [SLER] S
10.85	80.4314 - [SLER] S	80.3314 - [SLER] S	2.3014 - [SLER] S
10.90	79.4714 - [SLER] S	79.3714 - [SLER] S	2.3514 - [SLER] S
10.95	78.4914 - [SLER] S	78.3814 - [SLER] S	2.3814 - [SLER] S
11.00	77.4914 - [SLER] S	77.3814 - [SLER] S	2.4114 - [SLER] S
11.05	76.4814 - [SLER] S	76.3614 - [SLER] S	2.4114 - [SLER] S
11.10	75.4614 - [SLER] S	75.3414 - [SLER] S	2.4014 - [SLER] S
11.15	74.4514 - [SLER] S	74.3314 - [SLER] S	2.3814 - [SLER] S
11.20	73.4414 - [SLER] S	73.3314 - [SLER] S	2.3414 - [SLER] S
11.25	72.4614 - [SLER] S	72.3514 - [SLER] S	2.2914 - [SLER] S
11.30	71.4914 - [SLER] S	71.3914 - [SLER] S	2.2214 - [SLER] S
11.35	70.5614 - [SLER] S	70.4614 - [SLER] S	2.1414 - [SLER] S
11.40	69.6714 - [SLER] S	69.5814 - [SLER] S	2.0514 - [SLER] S
11.45	68.8214 - [SLER] S	68.7414 - [SLER] S	1.9414 - [SLER] S
11.50	68.0214 - [SLER] S	67.9514 - [SLER] S	1.8214 - [SLER] S
11.55	67.2914 - [SLER] S	67.2214 - [SLER] S	1.6914 - [SLER] S
11.60	66.6214 - [SLER] S	66.5614 - [SLER] S	1.5414 - [SLER] S
11.65	66.0214 - [SLER] S	65.9714 - [SLER] S	1.3814 - [SLER] S
11.70	65.5014 - [SLER] S	65.4614 - [SLER] S	1.2014 - [SLER] S

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11.75	65.0614 - [SLER] S	65.0414 - [SLER] S	1.0114 - [SLER] S
11.80	64.7214 - [SLER] S	64.7114 - [SLER] S	0.8114 - [SLER] S
11.85	64.4814 - [SLER] S	64.4814 - [SLER] S	0.6014 - [SLER] S
11.90	64.3514 - [SLER] S	64.3514 - [SLER] S	0.3714 - [SLER] S
11.95	64.3314 - [SLER] S	64.3314 - [SLER] S	0.1314 - [SLER] S

## Verifica a SLU \* Diagrammi M-N delle sezioni

Di seguito sono riportati per ogni tratto di armatura i diagrammi di interazione  $M_u-N_u$  della sezione; sono stati calcolati 16 punti per ogni sezione analizzata.

Per la costruzione dei diagrammi limiti si sono assunti i seguenti valori:

Tensione caratteristica cubica del cls	$R_{bk} = 306 \text{ [kg/cmq]}$
Tensione caratteristica cilindrica del cls ( $0.83 \times R_{bk}$ )	$R_{ck} = 254 \text{ (Kg/cm}^2\text{)}$
Fattore di riduzione per carico di lunga permanenza	$\psi = 0.85$
Tensione caratteristica di snervamento dell'acciaio	$f_{yk} = 4589 \text{ [kg/cmq]}$
Coefficiente di sicurezza cls	$\gamma_c = 1.50$
Coefficiente di sicurezza acciaio	$\gamma_s = 1.15$
Resistenza di calcolo del cls ( $\psi R_{ck} / \gamma_c$ )	$R_c^* = 144 \text{ (Kg/cm}^2\text{)}$
Resistenza di calcolo dell'acciaio ( $f_{yk} / \gamma_s$ )	$R_s^* = 3990 \text{ (Kg/cm}^2\text{)}$
Modulo elastico dell'acciaio	$E_s = 2100000 \text{ (Kg/cm}^2\text{)}$
Deformazione ultima del calcestruzzo	$\epsilon_{cu} = 0.0035 \text{ (0.35\%)}$
Deformazione del calcestruzzo al limite elastoplastico	$\epsilon_{ck} = 0.0020 \text{ (0.20\%)}$
Deformazione ultima dell'acciaio	$\epsilon_{yu} = 0.0100 \text{ (1.00\%)}$
Deformazione dell'acciaio al limite elastico ( $R_s^* / E_s$ )	$\epsilon_{yk} = 0.0015 \text{ (0.19\%)}$

### Legame costitutivo del calcestruzzo

Per il legame costitutivo del calcestruzzo si assume il diagramma parabola-rettangolo espresso dalle seguenti relazioni:

Tratto parabolico:  $0 \leq \epsilon_c \leq \epsilon_{ck}$

$$\sigma_c = \frac{R_c^* (2\epsilon_c \epsilon_{ck} - \epsilon_c^2)}{\epsilon_{ck}^2}$$

Tratto rettangolare:  $\epsilon_{ck} < \epsilon_c \leq \epsilon_{cu}$

$$\sigma_c = R_c^*$$

### Legame costitutivo dell'acciaio

Per l'acciaio si assume un comportamento elastico-perfettamente plastico espresso dalle seguenti relazioni:

$$\sigma_s = E_s \epsilon_s \quad \text{per } 0 \leq \epsilon_s \leq \epsilon_{sy}$$

$$\sigma_s = R_s^* \quad \text{per } \epsilon_{sy} < \epsilon_s \leq \epsilon_{su}$$

### Tratto armatura palo 1

Nr	$N_u$	$M_u$
1	-211697.24	0.00
2	0.00	15420.98
3	39074.57	15624.05
4	58611.85	15297.14
5	78149.14	14592.66
6	97686.42	13765.56
7	117223.71	12912.17
8	136760.99	12012.19

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9	156298.28	11071.58
10	175835.56	10057.60
11	195372.85	8964.69
12	214910.13	7773.23
13	234447.42	6459.23
14	253984.70	5022.51
15	273521.99	3513.53
16	293059.27	0.00
17	293059.27	0.00
18	273521.99	-3513.53
19	253984.70	-5022.51
20	234447.42	-6459.23
21	214910.13	-7773.23
22	195372.85	-8964.69
23	175835.56	-10057.60
24	156298.28	-11071.58
25	136760.99	-12012.19
26	117223.71	-12912.17
27	97686.42	-13765.56
28	78149.14	-14592.66
29	58611.85	-15297.14
30	39074.57	-15624.05
31	0.00	-15420.98
32	-211697.24	0.00

## **Dichiarazioni secondo N.T.C. 2008 (punto 10.2)**

### **Analisi e verifiche svolte con l'ausilio di codici di calcolo**

*Il sottoscritto, in qualità di calcolatore delle opere in progetto, dichiara quanto segue.*

#### **Tipo di analisi svolta**

*L'analisi strutturale e le verifiche sono condotte con l'ausilio di un codice di calcolo automatico. La verifica della sicurezza degli elementi strutturali è stata valutata con i metodi della scienza delle costruzioni. L'analisi strutturale è condotta con l'analisi statica non-lineare, utilizzando il metodo degli spostamenti per la valutazione dello stato limite indotto dai carichi statici. L'analisi strutturale sotto le azioni sismiche è condotta con il metodo dell'analisi statica equivalente secondo le disposizioni del capitolo 7 del DM 14/01/2008.*

*L'analisi strutturale viene effettuata con il metodo degli elementi finiti, schematizzando la struttura in elementi lineari e nodi. Le incognite del problema sono le componenti di spostamento in corrispondenza di ogni nodo (2 spostamenti e 1 rotazioni).*

*La verifica delle sezioni degli elementi strutturali è eseguita con il metodo degli Stati Limite. Le combinazioni di carico adottate sono esaustive relativamente agli scenari di carico più gravosi cui l'opera sarà soggetta.*

#### **Origine e caratteristiche dei codici di calcolo**

*Titolo* PAC - Analisi e Calcolo Paratie  
*Versione* 10.0  
*Produttore* Aztec Informatica srl, Casole Bruzio (CS)  
*Utente*  
*Licenza*

#### **Affidabilità dei codici di calcolo**

*Un attento esame preliminare della documentazione a corredo del software ha consentito di valutarne l'affidabilità. La documentazione fornita dal produttore del software contiene un'esauriente descrizione delle basi teoriche, degli algoritmi impiegati e l'individuazione dei campi d'impiego. La società produttrice Aztec Informatica srl ha verificato l'affidabilità e la robustezza del codice di calcolo attraverso un numero significativo di casi prova in cui i risultati dell'analisi numerica sono stati confrontati con soluzioni teoriche.*

#### **Modalità di presentazione dei risultati**

*La relazione di calcolo strutturale presenta i dati di calcolo tale da garantirne la leggibilità, la corretta interpretazione e la riproducibilità. La relazione di calcolo illustra in modo esaustivo i dati in ingresso ed i risultati delle analisi in forma tabellare.*

#### **Informazioni generali sull'elaborazione**

*Il software prevede una serie di controlli automatici che consentono l'individuazione di errori di modellazione, di non rispetto di limitazioni geometriche e di armatura e di presenza di elementi non verificati. Il codice di calcolo consente di visualizzare e controllare, sia in forma grafica che tabellare, i dati del modello strutturale, in modo da avere una visione consapevole del comportamento corretto del modello strutturale.*

#### **Giudizio motivato di accettabilità dei risultati**

*I risultati delle elaborazioni sono stati sottoposti a controlli dal sottoscritto utente del software. Tale valutazione ha compreso il confronto con i risultati di semplici calcoli, eseguiti con metodi tradizionali. Inoltre sulla base di considerazioni riguardanti gli stati tensionali e deformativi determinati, si è valutata la validità delle scelte operate in sede di schematizzazione e di modellazione della struttura e delle azioni.*

*In base a quanto sopra, io sottoscritto asserisco che l'elaborazione è corretta ed idonea al caso specifico, pertanto i risultati di calcolo sono da ritenersi validi ed accettabili.*