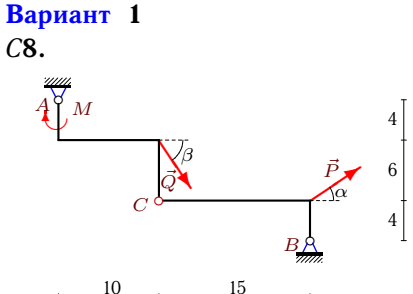
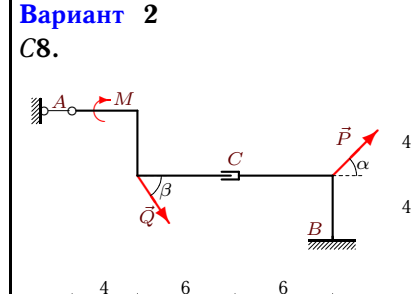
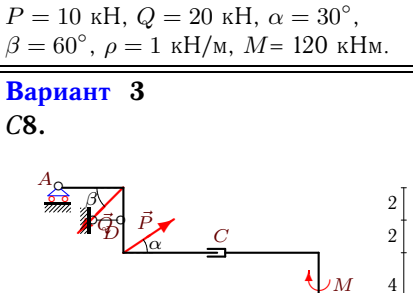
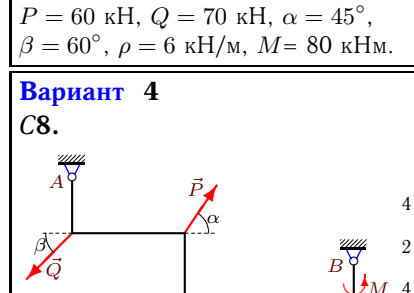
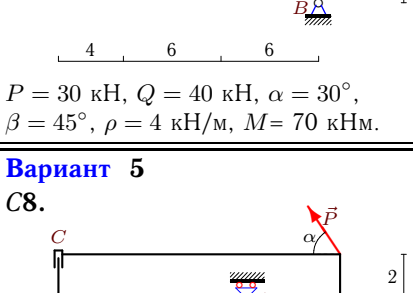
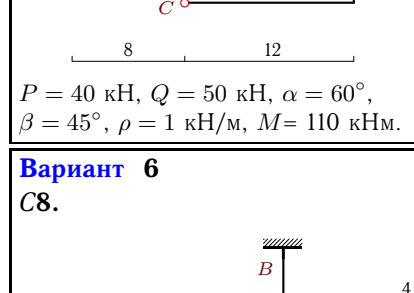
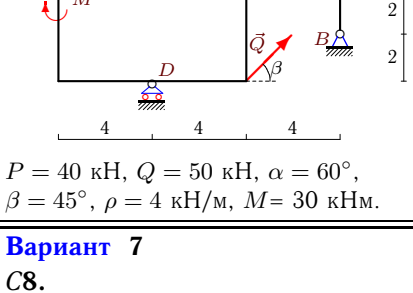
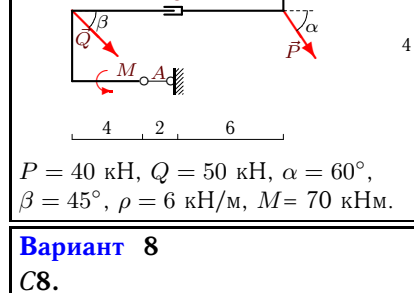


Расчет составной конструкции

Рама состоит из двух частей, соединенных шарниром или скользящей заделкой. Дан погонный вес рамы ρ , размеры в метрах и нагрузки. Найти реакции опор.

Кирсанов М.Н. Решебник. Теоретическая механика с. 54.

<p>Вариант 1 С8.</p>  <p>$P = 10 \text{ кН}, Q = 20 \text{ кН}, \alpha = 30^\circ,$ $\beta = 60^\circ, \rho = 1 \text{ кН/м}, M = 120 \text{ кНм}.$</p>	<p>Вариант 2 С8.</p>  <p>$P = 60 \text{ кН}, Q = 70 \text{ кН}, \alpha = 45^\circ,$ $\beta = 60^\circ, \rho = 6 \text{ кН/м}, M = 80 \text{ кНм}.$</p>
<p>Вариант 3 С8.</p>  <p>$P = 30 \text{ кН}, Q = 40 \text{ кН}, \alpha = 30^\circ,$ $\beta = 45^\circ, \rho = 4 \text{ кН/м}, M = 70 \text{ кНм}.$</p>	<p>Вариант 4 С8.</p>  <p>$P = 40 \text{ кН}, Q = 50 \text{ кН}, \alpha = 60^\circ,$ $\beta = 45^\circ, \rho = 1 \text{ кН/м}, M = 110 \text{ кНм}.$</p>
<p>Вариант 5 С8.</p>  <p>$P = 40 \text{ кН}, Q = 50 \text{ кН}, \alpha = 60^\circ,$ $\beta = 45^\circ, \rho = 4 \text{ кН/м}, M = 30 \text{ кНм}.$</p>	<p>Вариант 6 С8.</p>  <p>$P = 40 \text{ кН}, Q = 50 \text{ кН}, \alpha = 60^\circ,$ $\beta = 45^\circ, \rho = 6 \text{ кН/м}, M = 70 \text{ кНм}.$</p>
<p>Вариант 7 С8.</p>  <p>$P = 10 \text{ кН}, Q = 20 \text{ кН}, \alpha = 30^\circ,$ $\beta = 60^\circ, \rho = 6 \text{ кН/м}, M = 40 \text{ кНм}.$</p>	<p>Вариант 8 С8.</p>  <p>$P = 50 \text{ кН}, Q = 60 \text{ кН}, \alpha = 45^\circ,$ $\beta = 30^\circ, \rho = 6 \text{ кН/м}, M = 70 \text{ кНм}.$</p>

Вариант 9
С8.

$P = 50 \text{ кН}, Q = 60 \text{ кН}, \alpha = 45^\circ,$
 $\beta = 30^\circ, \rho = 1 \text{ кН/м}, M = 80 \text{ кНм}.$

Вариант 10
С8.

$P = 50 \text{ кН}, Q = 60 \text{ кН}, \alpha = 45^\circ,$
 $\beta = 30^\circ, \rho = 3 \text{ кН/м}, M = 20 \text{ кНм}.$

Вариант 11
С8.

$P = 50 \text{ кН}, Q = 60 \text{ кН}, \alpha = 45^\circ,$
 $\beta = 30^\circ, \rho = 2 \text{ кН/м}, M = 50 \text{ кНм}.$

Вариант 12
С8.

$P = 50 \text{ кН}, Q = 60 \text{ кН}, \alpha = 45^\circ,$
 $\beta = 30^\circ, \rho = 5 \text{ кН/м}, M = 90 \text{ кНм}.$

Вариант 13
С8.

$P = 60 \text{ кН}, Q = 70 \text{ кН}, \alpha = 45^\circ,$
 $\beta = 60^\circ, \rho = 4 \text{ кН/м}, M = 70 \text{ кНм}.$

Вариант 14
С8.

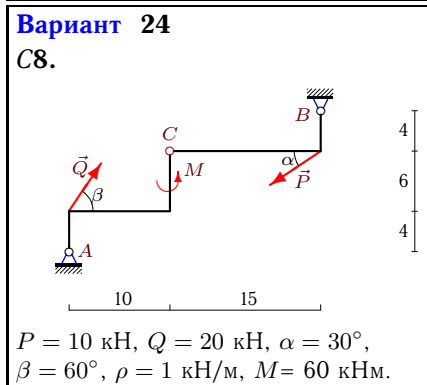
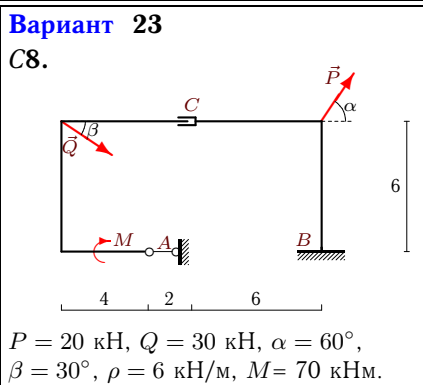
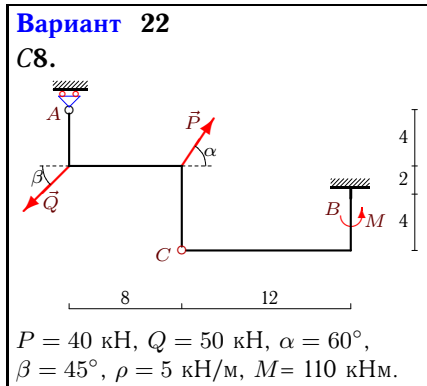
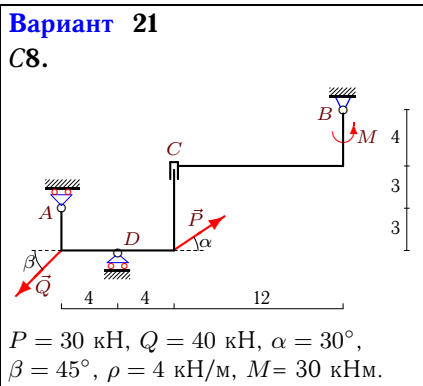
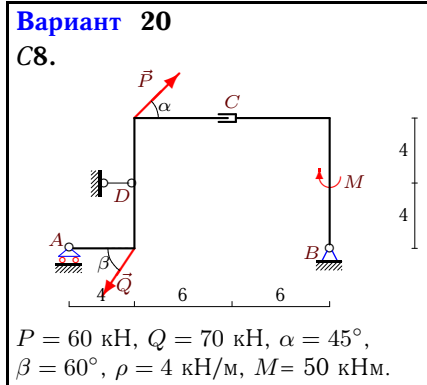
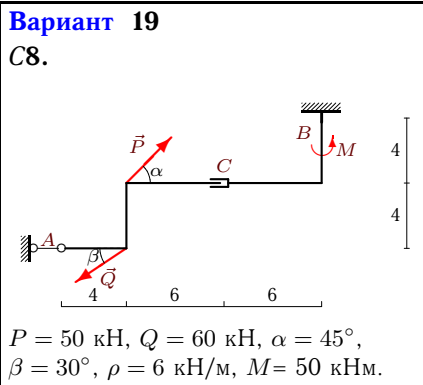
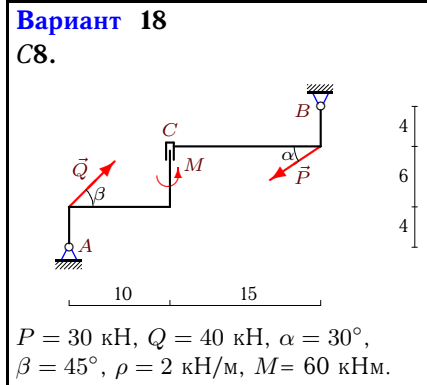
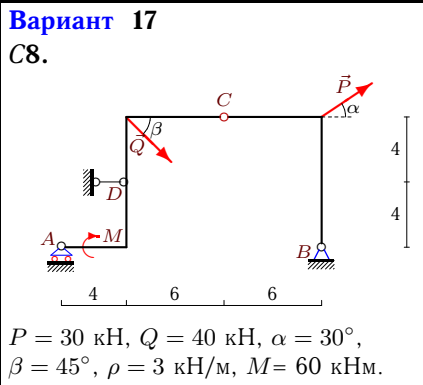
$P = 50 \text{ кН}, Q = 60 \text{ кН}, \alpha = 45^\circ,$
 $\beta = 30^\circ, \rho = 5 \text{ кН/м}, M = 80 \text{ кНм}.$

Вариант 15
С8.

$P = 10 \text{ кН}, Q = 20 \text{ кН}, \alpha = 30^\circ,$
 $\beta = 60^\circ, \rho = 5 \text{ кН/м}, M = 130 \text{ кНм}.$

Вариант 16
С8.

$P = 20 \text{ кН}, Q = 30 \text{ кН}, \alpha = 60^\circ,$
 $\beta = 30^\circ, \rho = 5 \text{ кН/м}, M = 120 \text{ кНм}.$



Вариант 25
С8.

$P = 60 \text{ кН}, Q = 70 \text{ кН}, \alpha = 45^\circ,$
 $\beta = 60^\circ, \rho = 2 \text{ кН/м}, M = 70 \text{ кНм}.$

Вариант 26
С8.

$P = 10 \text{ кН}, Q = 20 \text{ кН}, \alpha = 30^\circ,$
 $\beta = 60^\circ, \rho = 3 \text{ кН/м}, M = 70 \text{ кНм}.$

Вариант 27
С8.

$P = 60 \text{ кН}, Q = 70 \text{ кН}, \alpha = 45^\circ,$
 $\beta = 60^\circ, \rho = 4 \text{ кН/м}, M = 90 \text{ кНм}.$

Вариант 28
С8.

$P = 50 \text{ кН}, Q = 60 \text{ кН}, \alpha = 45^\circ,$
 $\beta = 30^\circ, \rho = 4 \text{ кН/м}, M = 70 \text{ кНм}.$

Вариант 29
С8.

$P = 60 \text{ кН}, Q = 70 \text{ кН}, \alpha = 45^\circ,$
 $\beta = 60^\circ, \rho = 2 \text{ кН/м}, M = 70 \text{ кНм}.$

Вариант 30
С8.

$P = 40 \text{ кН}, Q = 50 \text{ кН}, \alpha = 60^\circ,$
 $\beta = 45^\circ, \rho = 1 \text{ кН/м}, M = 10 \text{ кНм}.$

Ответы

	X_A	Y_A	X_B	Y_B	X_D	Y_D	M_B
1	-66.6	57.6	47.95	-6.29	—	—	—
2	-35	—	-42.43	162.2	—	—	-1673.76
3	—	56.37	0	52.91	2.3	—	—
4	16.5	34.26	-1.13	0.46	—	—	—
5	—	-145.53	-15.36	29.36	—	182.18	—
6	-35.36	—	-20	214	—	—	-1392.84
7	—	120.32	1.34	96	—	—	50.68
8	-51.96	—	35.36	126.64	—	—	-1196.84
9	-63.64	-44.36	47.03	73.71	—	—	—
10	—	46.38	16.6	36.42	—	43.84	—
11	-68.7	6	52.1	67.36	—	—	—
12	-26.96	—	10.36	54.64	—	—	-371.42
13	—	129.24	-42.43	0.96	-35	—	—
14	93.75	—	-181.07	225.36	—	—	-2258.53
15	—	31.43	-1.34	126.25	—	—	-860.36
16	—	68.97	15.98	48.7	—	—	-138.33
17	—	35.42	-41.9	73.86	-12.37	—	—
18	-17.42	11.72	15.12	53	—	—	—
19	16.6	—	0	138.64	—	—	-900.31
20	—	47.16	0	99.03	-7.43	—	—
21	—	105.03	2.3	64	—	-23.74	—
22	—	86.87	15.36	83.84	—	—	-454.69
23	-25.98	—	-10	165.68	—	—	-998.12
24	9.35	13.03	-10.7	13.65	—	—	—
25	-35	-29.7	42.43	59.5	—	—	—
26	—	25.52	-15.12	48.16	13.78	—	—
27	—	-48.7	-7.43	124	—	178.9	—
28	—	59.8	35.36	2.85	-51.96	—	—
29	-35	143.4	-42.43	7.65	—	—	—
30	-310.47	132.49	325.82	-97.77	—	—	—