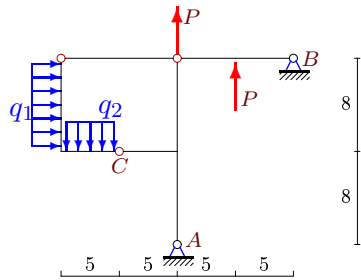


Статически определимая рама

Задача М21.1а.

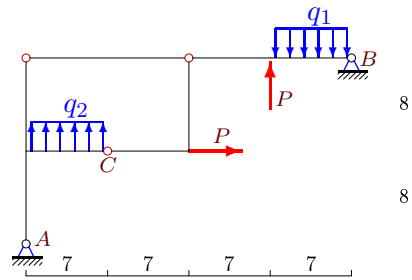
Смирнов Кирилл.



$q_1 = 6 \text{ кН/м}, q_2 = 12 \text{ кН/м}, P = 12 \text{ кН}. \Delta y_C - ?$

Задача М21.2а.

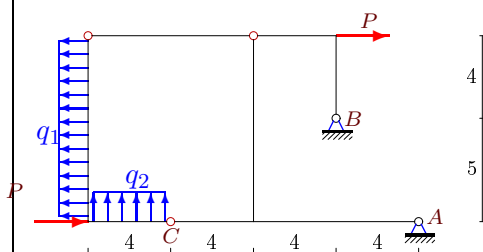
Волков Никита



$q_1 = 12 \text{ кН/м}, q_2 = 33 \text{ кН/м}, P = 15 \text{ кН}. \Delta y_C - ?$

Задача М21.3а.

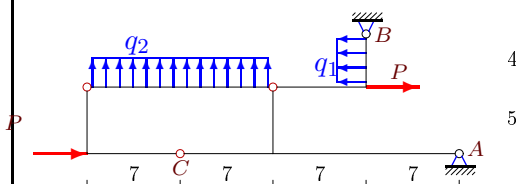
Хурэлбаяр Гэрэлт-Од



$q_1 = 12 \text{ кН/м}, q_2 = 7 \text{ кН/м}, P = 24 \text{ кН}. \Delta y_C - ?$

Задача М21.4а.

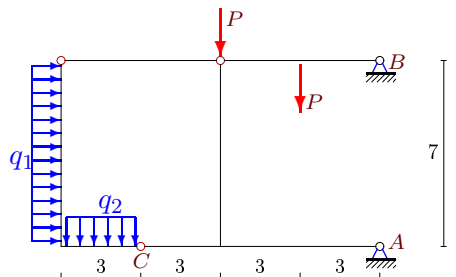
Бусовиков Данил



$q_1 = 12 \text{ кН/м}, q_2 = 7 \text{ кН/м}, P = 24 \text{ кН}. \Delta y_C - ?$

Задача М21.5а.

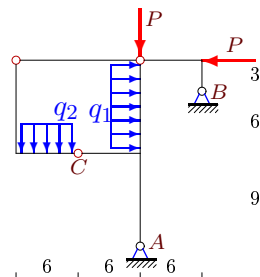
Баширов Башир



$q_1 = 5 \text{ кН/м}, q_2 = 6 \text{ кН/м}, P = 9 \text{ кН}. \Delta y_C - ?$

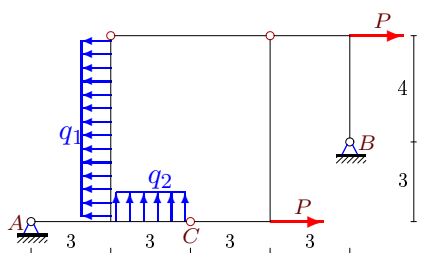
Задача М21.6а.

Набиев Шамиль



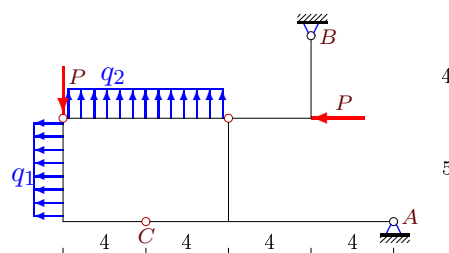
$q_1 = 5 \text{ кН/м}, q_2 = 3 \text{ кН/м}, P = 12 \text{ кН}. \Delta x_C - ?$

Задача М21.7а.



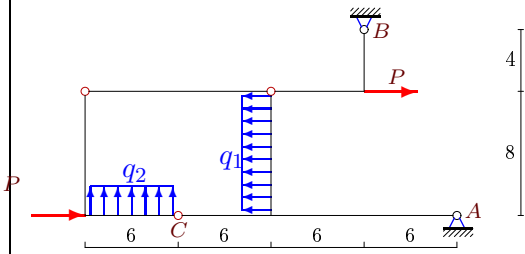
$q_1 = 15 \text{ кН/м}, q_2 = 12 \text{ кН/м}, P = 30 \text{ кН}. \Delta y_C - ?$

Задача М21.8а.



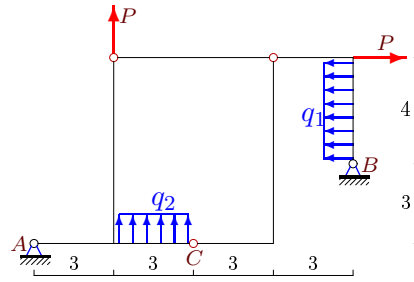
$q_1 = 3 \text{ кН/м}, q_2 = 9 \text{ кН/м}, P = 18 \text{ кН}. \Delta y_C - ?$

Задача M21.9.



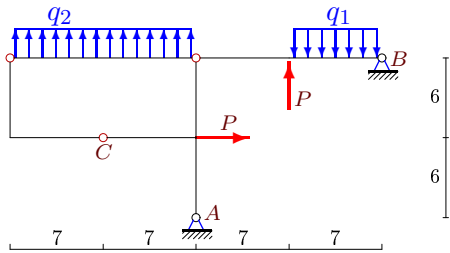
$q_1 = 18 \text{кН/м}$, $q_2 = 39 \text{кН/м}$, $P = 24 \text{кН}$. Δy_C - ?

Задача M21.10.



$q_1 = 9 \text{кН/м}$, $q_2 = 30 \text{кН/м}$, $P = 33 \text{кН}$. Δy_C - ?

Задача M21.11.



$q_1 = 12 \text{кН/м}$, $q_2 = 15 \text{кН/м}$, $P = 3 \text{кН}$. Δy_C - ?

Nº	X_A	X_B	Y_A	Y_B	x_A	x_B	y_A	y_B	$EJ\Delta \cdot 10^{-3}$
1	-40.125	-7.875	42.000	-6.000	0.313	-0.313	-1.000	0.000	
				+0.14 - 2.5 - 2.14 =					-4.500
2	-46.219	31.219	-217.500	55.500	-0.438	0.438	-1.000	0.000	
				+3.21 + 11.66 + 3.45 =					15.025
3	182.000	-122.000	-150.000	122.000	12.000	-12.000	-13.000	12.000	
				+31.23 + 31.23 + 0 + 425.09 + 0 + 0.6 + 332.8 =					820.949
4	134.308	-134.308	-7.538	-90.462	1.615	-1.615	-0.077	-0.923	
				+9.55 + 5.46 + 0 + 6.04 + 0 + 5.6 + 0.53 =					27.380
5	-56.071	21.071	31.500	4.500	1.286	-1.286	-1.000	0.000	
				-5.1 - 0.16 - 2.27 =					-7.533
6	-20.250	-12.750	23.625	6.375	-0.500	-0.500	-0.250	0.250	
				+0.11 + 0.06 - 0 + 1 - 0 - 0 + 2.46 =					2.951
7	28.184	16.816	-13.579	-22.421	-0.316	0.316	-0.579	-0.421	
				+0.08 + 0.11 + 0.22 + 0.2 - 0.02 + 0.08 + 0.07 =					-0.016
8	67.500	-34.500	-19.500	-34.500	0.923	-0.923	-0.077	-0.923	
				+0.68 + 0.68 + 1.75 + 0.38 + 0.26 =					3.753
9	379.125	-283.125	-45.250	-188.750	1.125	-1.125	-0.250	-0.750	
				+10.2 + 6.8 + 46.73 + 16.85 + 6.52 =					90.536
10	-36.000	39.000	-95.000	-28.000	-0.316	0.316	-0.579	-0.421	
				+0.1 + 0.14 + 2.72 + 0.25 + 0.09 + 0.1 + 0.5 =					3.880
11	121.000	-124.000	-190.500	61.500	0.583	-0.583	-1.000	0.000	
				+0.06 + 12 + 5.08 =					17.150