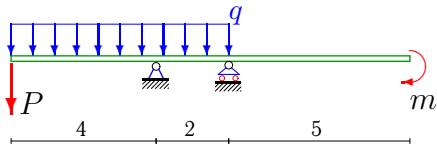


# Балка

Построить эпюры моментов и перерезывающих сил в балке. Найти сечение балки с максимальным моментом. Определить прогиб  $\Delta y$  балки в точке приложения силы  $P$ .

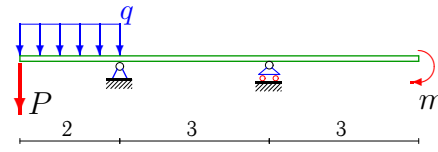
**Задача 24.1**



$P = 4 \text{ кН}, m = 20 \text{ кНм}, q = 12 \text{ кН/м}.$

24.2

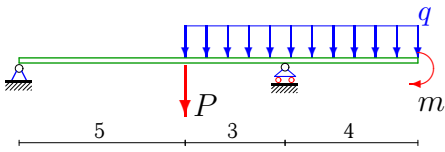
**Задача 24.2**



$P = 16 \text{ кН}, m = 30 \text{ кНм}, q = 8 \text{ кН/м}.$

24.2

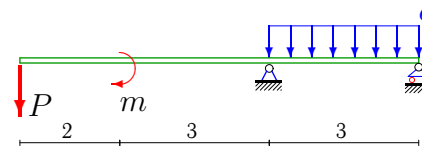
**Задача 24.3**



$P = 15 \text{ кН}, m = 10 \text{ кНм}, q = 16 \text{ кН/м}.$

24.2

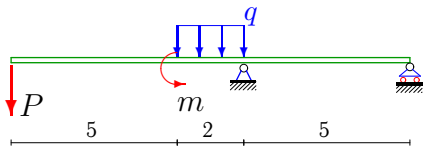
**Задача 24.4**



$P = 4 \text{ кН}, m = 10 \text{ кНм}, q = 16 \text{ кН/м}.$

24.2

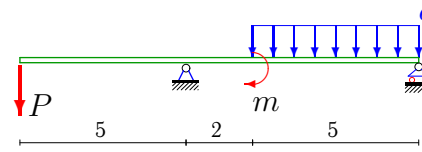
**Задача 24.5**



$P = 12 \text{ кН}, m = 40 \text{ кНм}, q = 36 \text{ кН/м}.$

24.2

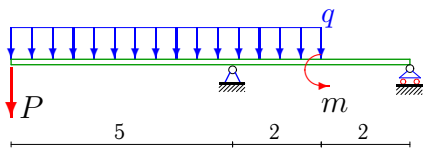
**Задача 24.6**



$P = 9 \text{ кН}, m = 40 \text{ кНм}, q = 4 \text{ кН/м}.$

24.2

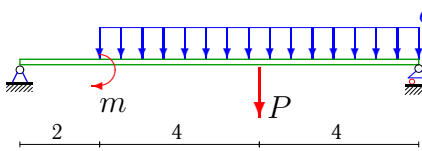
**Задача 24.7**



$P = 3 \text{ кН}, m = 30 \text{ кНм}, q = 32 \text{ кН/м}.$

24.2

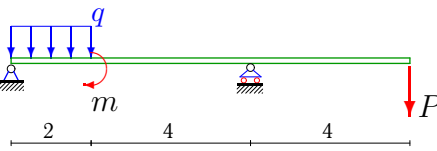
**Задача 24.8**



$P = 4 \text{ кН}, m = 20 \text{ кНм}, q = 12 \text{ кН/м}.$

24.2

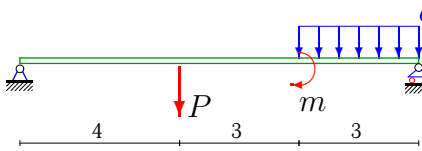
**Задача 24.9**



$P = 7 \text{ кН}, m = 40 \text{ кНм}, q = 4 \text{ кН/м}.$

24.2

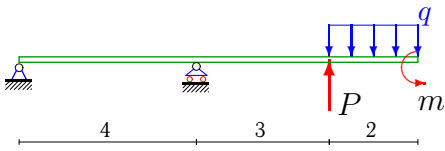
**Задача 24.10**



$P = 19 \text{ кН}, m = 30 \text{ кНм}, q = 8 \text{ кН/м}.$

24.2

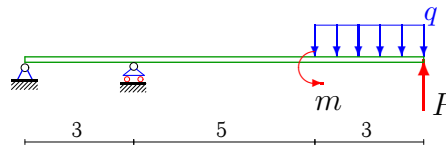
**Задача 24.11**



$P = 2 \text{ кН}, m = 40 \text{ кНм}, q = 36 \text{ кН/м}.$

24.2

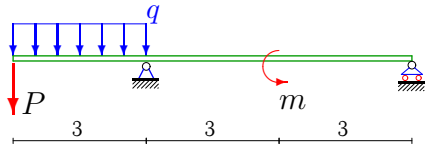
**Задача 24.12**



$P = 1 \text{ кН}, m = 10 \text{ кНм}, q = 24 \text{ кН/м}.$

24.2

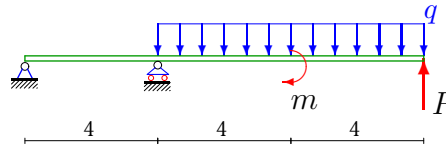
**Задача 24.13**



$P = 3 \text{ кН}, m = 30 \text{ кНм}, q = 32 \text{ кН/м}.$

24.2

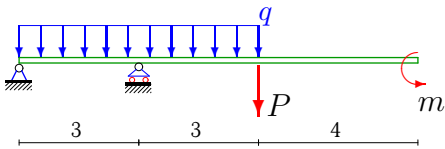
**Задача 24.14**



$P = 8 \text{ кН}, m = 40 \text{ кНм}, q = 4 \text{ кН/м}.$

24.2

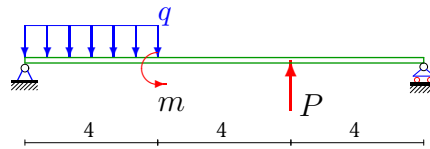
**Задача 24.15**



$P = 15 \text{ кН}, m = 20 \text{ кНм}, q = 28 \text{ кН/м}.$

24.2

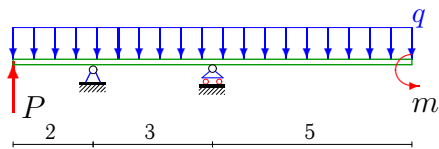
**Задача 24.16**



$P = 5 \text{ кН}, m = 10 \text{ кНм}, q = 24 \text{ кН/м}.$

24.2

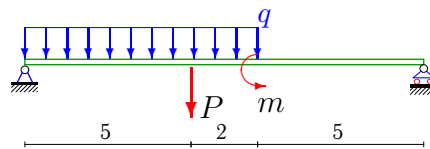
**Задача 24.17**



$P = 2 \text{ кН}, m = 20 \text{ кНм}, q = 28 \text{ кН/м}.$

24.2

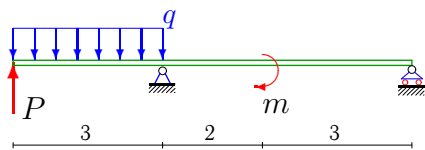
**Задача 24.18**



$P = 3 \text{ кН}, m = 10 \text{ кНм}, q = 24 \text{ кН/м}.$

24.2

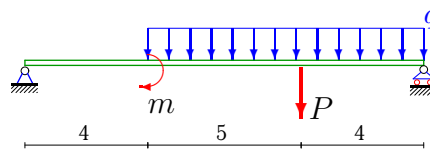
**Задача 24.19**



$P = 1 \text{ кН}, m = 20 \text{ кНм}, q = 12 \text{ кН/м}.$

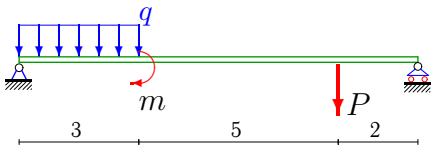
24.2

**Задача 24.20**



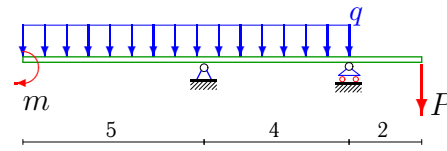
$P = 2 \text{ кН}, m = 30 \text{ кНм}, q = 8 \text{ кН/м}.$

24.2

**Задача 24.21**

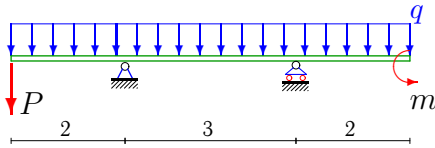
$$P = 17 \text{ кН}, m = 30 \text{ кНм}, q = 8 \text{ кН/м.}$$

24.2

**Задача 24.22**

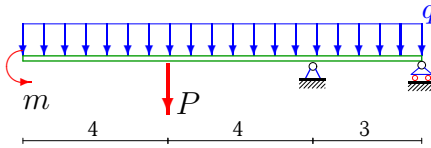
$$P = 15 \text{ кН}, m = 30 \text{ кНм}, q = 8 \text{ кН/м.}$$

24.2

**Задача 24.23**

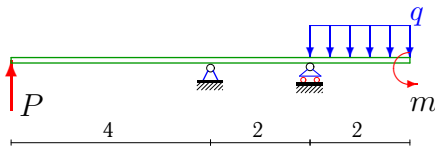
$$P = 10 \text{ кН}, m = 21 \text{ кНм}, q = 20 \text{ кН/м.}$$

24.2

**Задача 24.24**

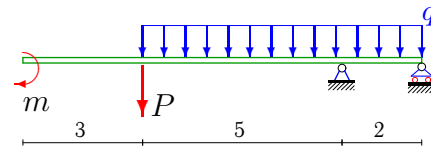
$$P = 19 \text{ кН}, m = 30 \text{ кНм}, q = 32 \text{ кН/м.}$$

24.2

**Задача 24.25**

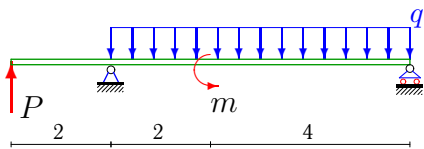
$$P = 1 \text{ кН}, m = 20 \text{ кНм}, q = 28 \text{ кН/м.}$$

24.2

**Задача 24.26**

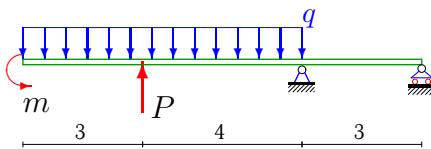
$$P = 11 \text{ кН}, m = 30 \text{ кНм}, q = 8 \text{ кН/м.}$$

24.2

**Задача 24.27**

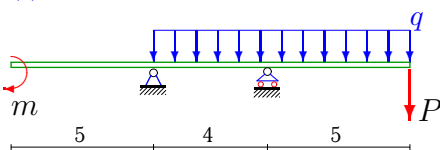
$$P = 2 \text{ кН}, m = 30 \text{ кНм}, q = 32 \text{ кН/м.}$$

24.2

**Задача 24.28**

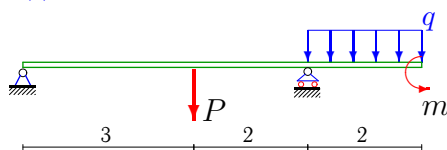
$$P = 7 \text{ кН}, m = 50 \text{ кНм}, q = 40 \text{ кН/м.}$$

24.2

**Задача 24.29**

$$P = 21 \text{ кН}, m = 10 \text{ кНм}, q = 16 \text{ кН/м.}$$

24.2

**Задача 24.30**

$$P = 15 \text{ кН}, m = 50 \text{ кНм}, q = 40 \text{ кН/м.}$$

24.2

**Балка**

	$R_A$	$R_B$	$\max M $	$x_*$	$EI\Delta y$
1	110	-34	112.00	4.00	-778.67
2	38	-6	48.00	2.00	-184.67
3	-2.63	129.63	138.00	8.00	161.25
4	31.33	20.67	13.35	6.71	-21.67
5	123.2	-39.2	196.00	7.00	-4450.67
6	16.86	12.14	45.00	5.00	-558.93
7	322.25	-95.25	415.00	5.00	-5126.67
8	38	62	156.17	5.17	-1529.60
9	-4.67	19.67	28.00	6.00	-236.44
10	12	31	57.00	7.00	-441.60
11	-60.5	130.5	242.00	4.00	-1742.00
12	-150	221	450.00	3.00	-12067.33
13	129.5	-30.5	153.00	3.00	-1246.50
14	-26	50	104.00	4.00	-2752.00
15	-8.33	191.33	151.00	3.00	-687.00
16	79.17	11.83	130.57	3.30	-1093.33
17	3.33	274.67	330.00	5.00	-421.67
18	121.58	49.42	307.92	5.00	-4178.89
19	41.2	-6.2	51.00	3.00	-363.50
20	23.23	50.77	156.65	6.90	-2212.10
21	20.8	20.2	56.40	3.00	-323.87
22	66	21	70.00	5.00	-170.67
23	93.67	56.33	60.00	2.00	-160.67
24	699.67	-328.67	1130.00	8.00	-10824.00
25	-21	76	36.00	6.00	-16.00
26	121.5	-54.5	125.00	8.00	-1111.67
27	98.33	91.67	140.67	2.00	577.33
28	607	-334	1002.00	7.00	-9538.67
29	-46.75	211.75	305.00	9.00	-3911.67
30	0	95	50.00	5.00	12.00