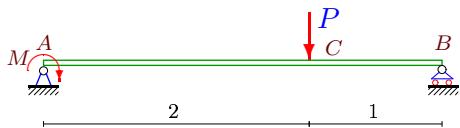
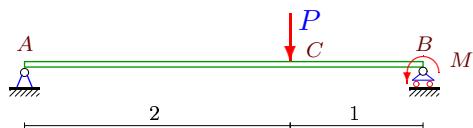


## Балка

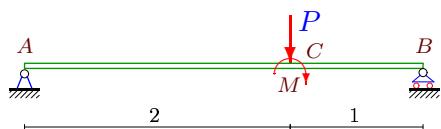
Найти прогиб  $\Delta y$  или угол поворота сечения  $\Delta\varphi$  балки в указанной точке.

**Задача 4.1.**
*Бабченко Аким*


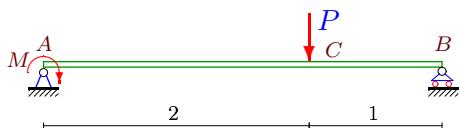
$$P = 9 \text{ кН}, M = 9 \text{ кНм}, \Delta\varphi_A = ?$$

**Задача 4.3.**
*Баранов Егор*


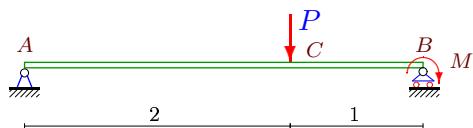
$$P = 9 \text{ кН}, M = 18 \text{ кНм}, \Delta\varphi_A = ?$$

**Задача 4.5.**
*Брыксина Кристина*


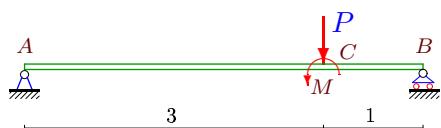
$$P = 9 \text{ кН}, M = 9 \text{ кНм}, \Delta\varphi_A = ?$$

**Задача 4.7.**
*Гричаниук Елена*


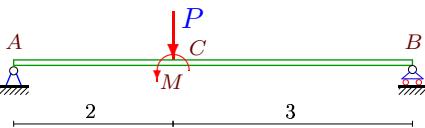
$$P = 9 \text{ кН}, M = 18 \text{ кНм}, \Delta\varphi_B = ?$$

**Задача 4.9.**
*Макарова Ирина*


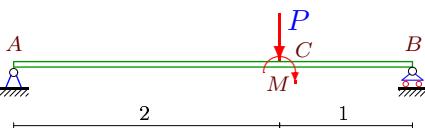
$$P = 9 \text{ кН}, M = 9 \text{ кНм}, \Delta\varphi_B = ?$$

**Задача 4.11.**
*Мартыненко Александр*


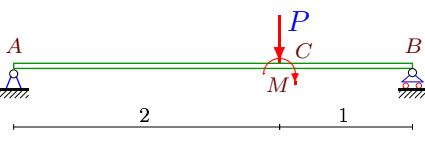
$$P = 24 \text{ кН}, M = 24 \text{ кНм}, \Delta\varphi_B = ?$$

**Задача 4.2.**
*Банинов Иван*


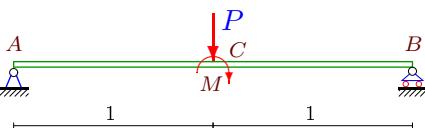
$$P = 15 \text{ кН}, M = 15 \text{ кНм}, \Delta\varphi_A = ?$$

**Задача 4.4.**
*Батуров Кирилл*


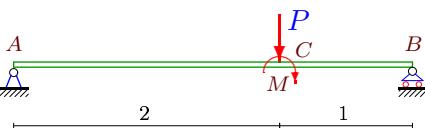
$$P = 9 \text{ кН}, M = 9 \text{ кНм}, \Delta\varphi_A = ?$$

**Задача 4.6.**
*Воронин Ярослав*


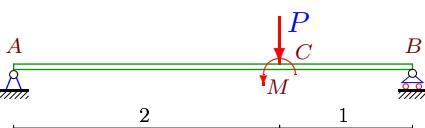
$$P = 9 \text{ кН}, M = 9 \text{ кНм}, \Delta\varphi_A = ?$$

**Задача 4.8.**
*Карасев Иван*


$$P = 12 \text{ кН}, M = 12 \text{ кНм}, \Delta\varphi_B = ?$$

**Задача 4.10.**
*Мальсагов Аланбек*


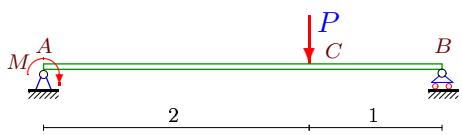
$$P = 18 \text{ кН}, M = 18 \text{ кНм}, \Delta\varphi_B = ?$$

**Задача 4.12.**
*Пономарев Александр*


$$P = 18 \text{ кН}, M = 18 \text{ кНм}, \Delta\varphi_B = ?$$

**Задача 4.13.**

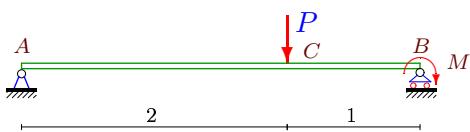
Романков Николай



$$P = 9 \text{ кН}, M = 18 \text{ кНм}, \Delta\varphi_C = ?$$

**Задача 4.15.**

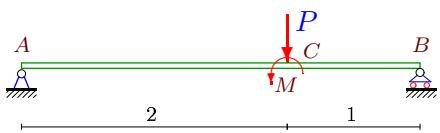
Слепцов Вадим



$$P = 9 \text{ кН}, M = 36 \text{ кНм}, \Delta\varphi_C = ?$$

**Задача 4.17.**

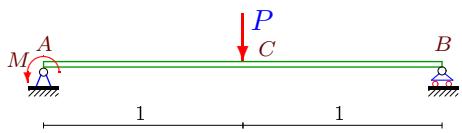
Чембилиев Данил



$$P = 9 \text{ кН}, M = 18 \text{ кНм}, \Delta\varphi_C = ?$$

**Задача 4.19.**

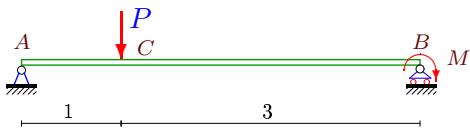
Верещагина Елизавета



$$P = 6 \text{ кН}, M = 12 \text{ кНм}, \Delta y_C = ?$$

**Задача 4.21.**

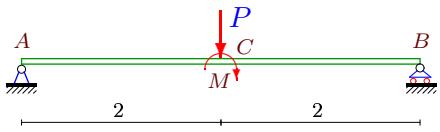
Галеев Максим



$$P = 8 \text{ кН}, M = 8 \text{ кНм}, \Delta y_C = ?$$

**Задача 4.23.**

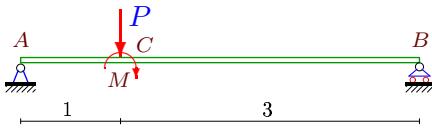
Ивкин Даниил



$$P = 3 \text{ кН}, M = 6 \text{ кНм}, \Delta y_C = ?$$

**Задача 4.14.**

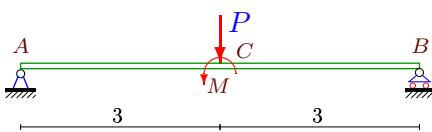
Семенов Александр



$$P = 12 \text{ кН}, M = 24 \text{ кНм}, \Delta\varphi_C = ?$$

**Задача 4.16.**

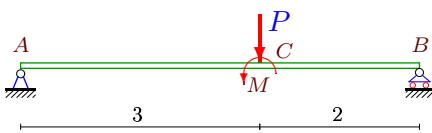
Сюряев Андрей



$$P = 6 \text{ кН}, M = 12 \text{ кНм}, \Delta\varphi_C = ?$$

**Задача 4.18.**

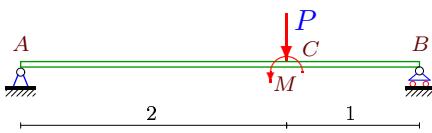
Юферов Андрей



$$P = 15 \text{ кН}, M = 30 \text{ кНм}, \Delta\varphi_C = ?$$

**Задача 4.20.**

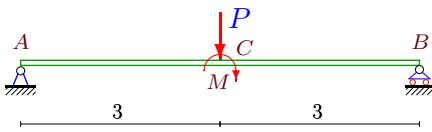
Вычужсина Злата



$$P = 9 \text{ кН}, M = 18 \text{ кНм}, \Delta y_C = ?$$

**Задача 4.22.**

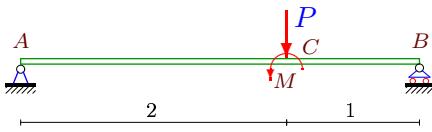
Гусев Олег



$$P = 6 \text{ кН}, M = 12 \text{ кНм}, \Delta y_C = ?$$

**Задача 4.24.**

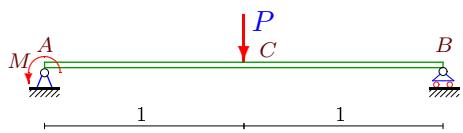
Коренев Никита



$$P = 9 \text{ кН}, M = 18 \text{ кНм}, \Delta y_C = ?$$

**Задача 4.25.**

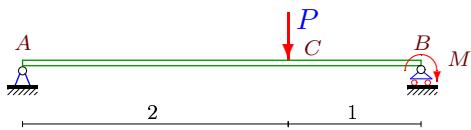
Корочкин Дмитрий



$$P = 6 \text{ кН}, M = 12 \text{ кНм}, \Delta y_C = ?$$

**Задача 4.27.**

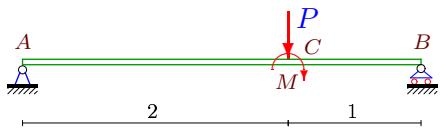
Максимов Михаил



$$P = 9 \text{ кН}, M = 18 \text{ кНм}, \Delta y_C = ?$$

**Задача 4.29.**

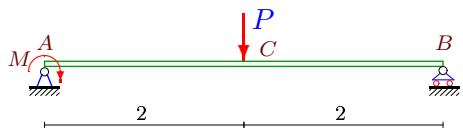
Манукало Арсений



$$P = 9 \text{ кН}, M = 18 \text{ кНм}, \Delta y_C = ?$$

**Задача 4.31.**

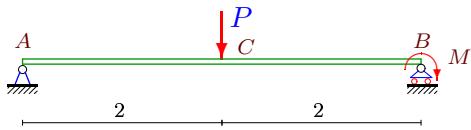
Панькин Александр



$$P = 12 \text{ кН}, M = 12 \text{ кНм}, \Delta y_C = ?$$

**Задача 4.33.**

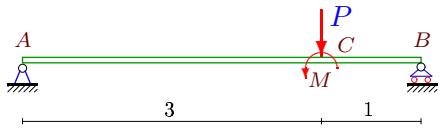
Ревюк Всеволод



$$P = 3 \text{ кН}, M = 6 \text{ кНм}, \Delta y_C = ?$$

**Задача 4.35.**

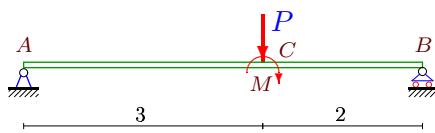
Савина Мария



$$P = 24 \text{ кН}, M = 24 \text{ кНм}, \Delta \varphi_B = ?$$

**Задача 4.26.**

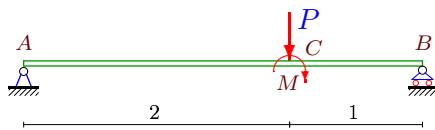
Ларионов Николай



$$P = 5 \text{ кН}, M = 10 \text{ кНм}, \Delta y_C = ?$$

**Задача 4.28.**

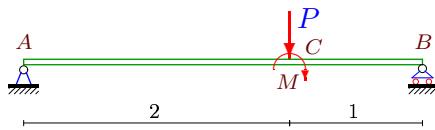
Мальков Дмитрий



$$P = 9 \text{ кН}, M = 18 \text{ кНм}, \Delta y_C = ?$$

**Задача 4.30.**

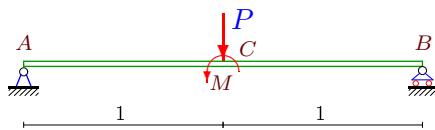
Моторин Кирилл



$$P = 9 \text{ кН}, M = 36 \text{ кНм}, \Delta y_C = ?$$

**Задача 4.32.**

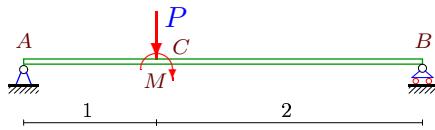
Райков Александр



$$P = 6 \text{ кН}, M = 12 \text{ кНм}, \Delta y_C = ?$$

**Задача 4.34.**

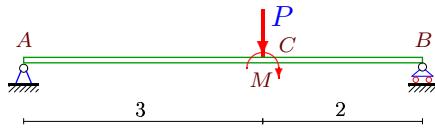
Ринчинова Сэлмэг



$$P = 9 \text{ кН}, M = 18 \text{ кНм}, \Delta y_C = ?$$

**Задача 4.36.**

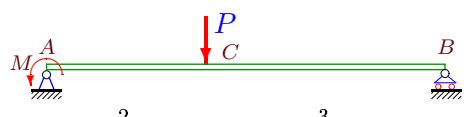
Черниговская



$$P = 5 \text{ кН}, M = 20 \text{ кНм}, \Delta y_C = ?$$

**Задача 4.37.**

Юрин Кирилл



$$P = 15 \text{ кН}, M = 30 \text{ кНм}, \Delta\varphi_A = ?$$