

Дано:

$$m = 6 \text{ кг}$$

$$c = 4200 \frac{\text{Дж}}{\text{кг}^\circ\text{C}}$$

$$\Delta t = 46^\circ\text{C}$$

$$q = 43 \frac{\text{МДж}}{\text{кг}}$$

$M = ?$

$$Q_{\text{нагр}} + Q_{\text{охлажд}} = 0$$

$$m \cdot c \cdot \Delta t - q \cdot M = 0$$

$$M = \frac{m \cdot c \cdot \Delta t}{q}$$

$$M = \frac{6 \cdot 4200 \cdot 46 \text{ Дж}}{43 \cdot 10^6 \frac{\text{Дж}}{\text{кг}}} =$$

$$\approx 0,03 \text{ кг}$$