

We have:

$$Mgh = cm\Delta T \Rightarrow$$

$$\Rightarrow h = \frac{cm\Delta T}{Mg} = \frac{4.186 \cdot 10^3 \cdot 1 \cdot 10}{800 \cdot 9.8} = 5 \text{ m.}$$

Answer: 5 meters.