

Part 1  $\checkmark$  7

$$M = M_0(1-r)^n$$

$$M = 120 \times (1-0.07)^4 \approx 89.76 \text{ g}$$

Part 1  $\checkmark$  8

$$Q = mc\Delta T$$

$$Q = 60 \times 0.45 \times (37-25)$$

$$Q = 324 \text{ J}$$

Part 1  $\checkmark$  10

$$M = M_0 e^{-kt}$$

$$105 = 150 e^{-k(1)}$$

$$k \approx 0.357 \text{ } \text{min}^{-1}$$

Part 1  $\checkmark$  17

$$Q = mc\Delta T$$

$$Q = 5 \times 0.129 \times (37-25)$$

$$Q = 7.74 \text{ J}$$

Part 1  $\checkmark$  18

$$M = M_0 e^{-kt}$$

$$35 = 50 e^{-k(1)}$$

$$k \approx 0.357 \text{ } \text{min}^{-1}$$