

$$16.0\text{g} \times \frac{1}{2} = 8.0\text{g} \times \frac{1}{2} = 4.0\text{g} \times \frac{1}{2} = 2.0\text{g} \times \frac{1}{2} = 1.0\text{g} \checkmark$$

(1) (2) (3) (4) ✓

4 halflives
 $4 \times 17 = \boxed{68 \text{ days}}$

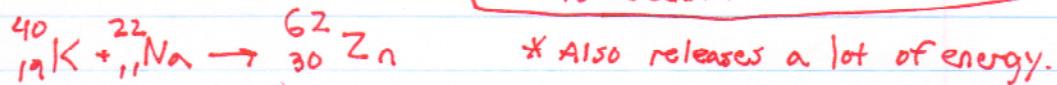
(b) time = 5.50 seconds

$$1.2\text{g} \times \frac{1}{2} = .6\text{g} \times \frac{1}{2} = .3\text{g} \times \frac{1}{2} = \boxed{.15\text{g}}$$

(1) (2) (3)

$.55\text{seconds}/3 = \boxed{1.83\text{seconds}}$

(c) Fusion is the result of two nuclei coming together to form a new larger atom. This requires a large amount of energy to occur.



Fission is the splitting of an unstable nucleus. This releases a larger amount of energy.

