

## Radioactive Decay: Formulas

$$\text{Number of Half Lives} = \frac{\text{Total Time}}{\text{Half-Life of the Isotope}}$$

$$\text{Amount of Isotope Remaining} = \frac{1}{2}^{(\text{Number of Half-Lives})} \times \text{Amount of Original Sample}$$

$$\text{Original Sample} = \frac{\text{Amount Left Over}}{\frac{1}{2}^{(\text{Number of Half-Lives})}}$$

$$\text{Half Life} = \frac{\text{Total Time}}{\text{Number of Half-Lives}}$$

$$\text{How Old} = \text{Half-Life} \times \text{Number of Half-Lives}$$