

- 30** Samples of two radioactive nuclides, X and Y, each have equal activity A_0 at time $t = 0$. X has a half-life of 24 years and Y a half-life of 16 years.

The samples are mixed together.

What will be the total activity of the mixture at $t = 48$ years?

A $\frac{1}{12}A_0$

B $\frac{3}{16}A_0$

C $\frac{1}{4}A_0$

D $\frac{3}{8}A_0$

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