

Number of half lives

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Step 1. Use the relation

$$(1/2)^n = \text{amount}$$

Here $(1/2)^n = 0.05$

$$n = \ln(0.05)/\ln(1/2) = 4.32$$

Step 2. multiply by the half life

$$\text{time} = 4.32 (8.05 \text{ days}) = 34.77 \text{ days}$$