The Math Dawg: Intro Applications Exponential Growth and Decay_1

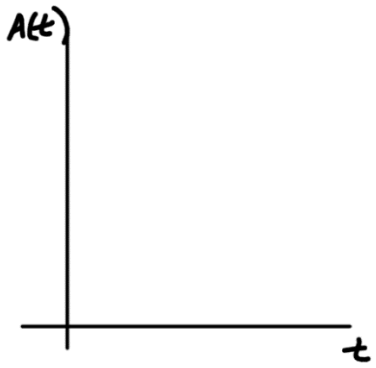
DIRECTIONS: Show all setups and work!! Calculator allowed.

1. Solve for r.

   $340 = 120r^{15}$

2. Solve for t using the Desmos calculator. Sketch the solution. Put numbers on your sketch.

   $$140 = 500(.95)^t$$



3. In Preztopia, the price of eggs rose from $1.34 per dozen in 2020 to $7.80 in 2024. What was the average percent increase in the price of eggs over the 4-year period?

4. The half-life of Haworthinium is 45 years. You currently have 1500 grams of the substance. How much will remain after 27 years?

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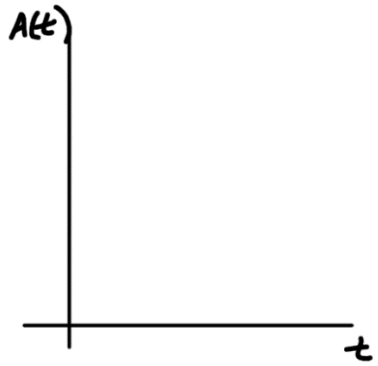
5. USE THE DESMOS GRAPHING CALCULATOR TO ASSIST. The half-life of Chromium is 27.8 days. If you currently have 500 g. of Chromium how long will it take to have 200 g. remaining? Include a simple sketch of your Desmos graph in your solution. Put numbers on your sketch



6. USE THE DESMOS GRAPHING CALCULATOR TO ASSIST. The half-life of Haworthonium has been found to be 1234 years. If you have 30 g. of the substance today how long will it take to have only 12 g. remaining?