Lesson 36 Worksheet

December 4, 2017

1. Fill in the following table:

Initial Amount	Half Life	Amount after 1,000 years
12 g	24,000 years	11.66g
100%	6,000 years	89.09%
2.06g	24,000 years	2g
52.76%	6,000 years	47%
10g	2409.4 years	7.5g
100%	2409.4 years	75%

2. Suppose the dodo population decreases at a rate proportional to the population.

   (a) If $P(2) = 100$ and $P(4) = 10$, what is $P(10)$? .01

   (b) If $P(0) = 100$ and $P(2) = 10$, what is $P(8)$? .01

   (c) What do you notice about your two answers? Why does this happen?
   The answers are the same because the amounts of time that pass between each are the same. (Notice this means we can assume the smallest time *is* the initial time, as long as we adjust all the other times.)