Assignment 2.6 – Compare Linear & Exponential Functions
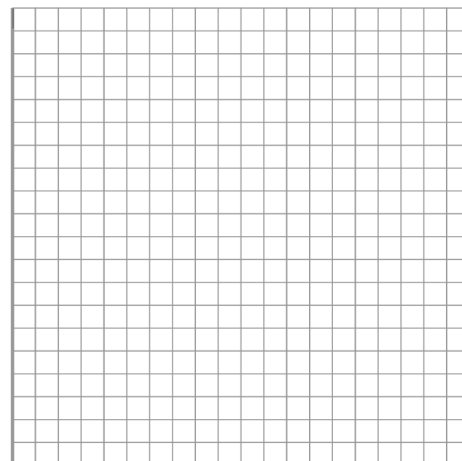
1.   The value of a car that you bought for $12,000 decreases at a rate of 5.6% per year.

Variables:

Equation:

Linear or Exponential:

Discrete or Continuous:

2.   Yessica's science fair project involved growing some seeds to see wheat fertilizer make the seeds grow faster. The data below shows the growth of the seed each week of the project.
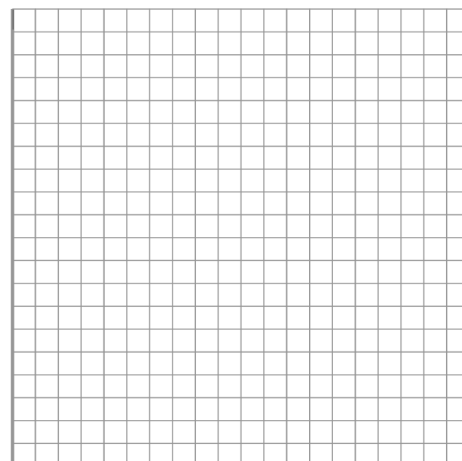
Week	1	2	3	4	5
Height (cm)	1.7	2.9	4.1	5.3	6.5

Variables:

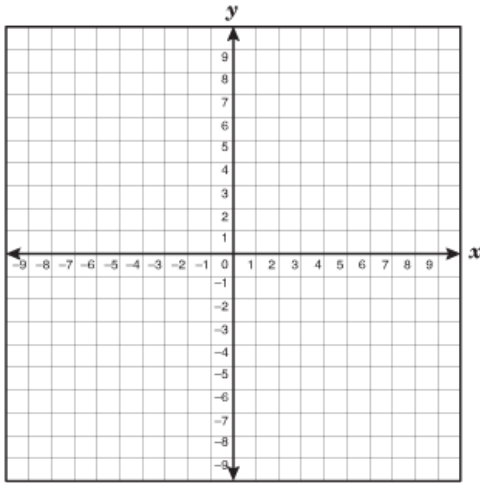Equation:

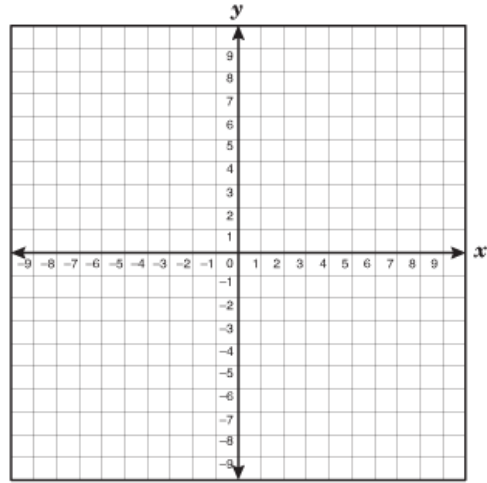Linear or Exponential:

Discrete or Continuous:

Refresh Your Memory

Graph the equations below.

3. $y = 4(x - 3) - 5$

4. $y = 2(3)^x$

With each given equation below, determine which type of function (linear or exponential). Also define the role of each number in the function using the given vocabulary words and describe the growth of the function.

Common ratio, slope, y-intercept, point, exponential growth, exponential decay, positive slope, negative slope

5. $y = -5(x - 7) - 10$

6. $y = \frac{4}{3}x + 12$

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7. $y = 4\left(\frac{1}{3}\right)^x$

8. $y = \frac{1}{2}(4)^x$

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