



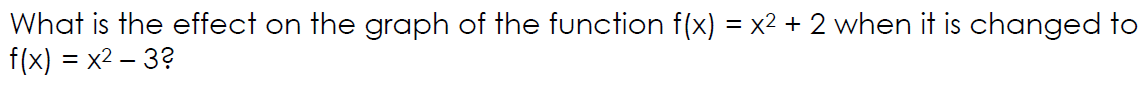
7.



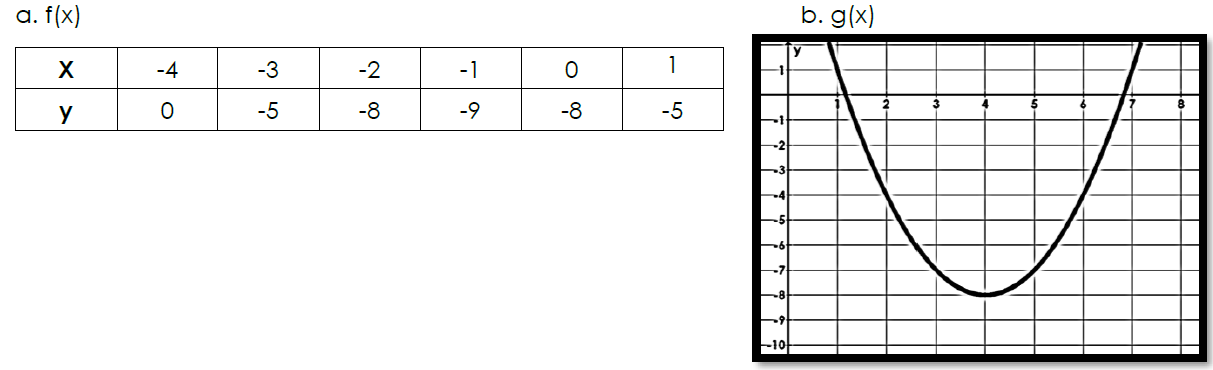
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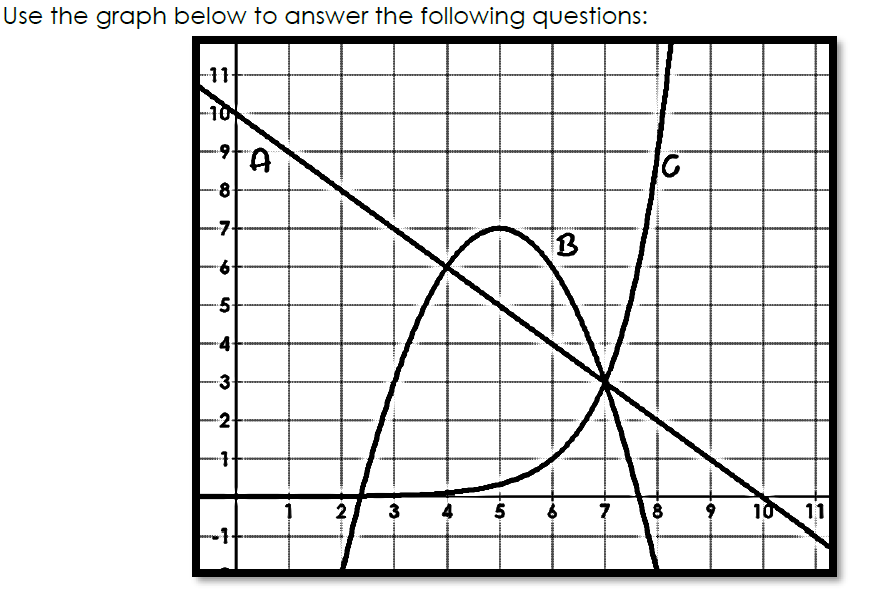


10.

**III. Consider the following Scenarios.**

11. which quadratic function has the smaller

minimum value? Explain.



12.

13. Which function has the largest ROC from [3, 5]?

14. Which function has the largest ROC from [7, 8]?

Answer Key

1. Linear
2. Exponential
3. Quadratic
4. Linear
5. Linear
6. Quadratic
7. Quadratic Function
   1. Stretch by factor of 3, Right 1, down 6
8. Exponential Function
   1. Reflect over x-axis, stretch by factor of 5, left 4
9. Linear Function
   1. Up 6
10. Vertex goes from (0, 2) to (0, -3). There will be a vertical shift down 5 units.
11. In order to find the smallest **minimum** value, you have to find the **vertex.**

The vertex of f(x) =(-1, -9) and the vertex of g(x) = (4, -8)

We interpret minimum and maximum values by the **y-values** of the vertex. In this case f(x) has a smaller y value, therefore it has a smaller minimum value. In a graph, you would see that the vertex for f(x) is lower than the vertex of g(x).

1. B, A, C
2. B Quadratic
3. C Exponential: Exponential will always result in the greatest rate of change over time.