

Math 2 Unit 10 Worksheet 8
Average Rate of Change

Name: _____
Date: _____ **Per:** _____

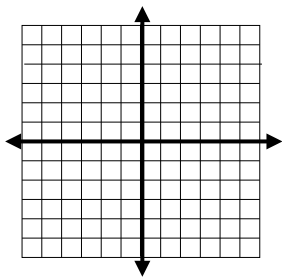
[1-7] Answer the following based on the average rate of change (Hint make an input/output table).

1. Given $f(x) = x^2$ find the average rate of change from 2 to 5.
2. Given $g(x) = 2x^2$ find the average rate of change from 2 to 5.
3. The average rate of change of $f(x)$ is different than $g(x)$. What does that mean in relationship to the graph?
4. Given $h(x) = 3^x$ find the average rate of change from 1 to 4.
5. Given $k(x) = 2^x$ find the average rate of change from 1 to 4.
6. The average rate of change of $h(x)$ is different than $k(x)$. What does this mean in relationship to the graph?
7. Find the average rate of change of $f(x)$ from 1 to 4. Compare this with your answer from number 5. Which function has a greater average rate of change, $f(x)$ or $k(x)$?

Review:

[8-11] Graph the parabola and determine key features.

8. $y = -\frac{1}{2}x^2$



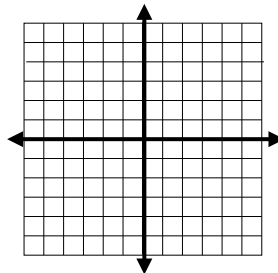
Vertex: _____

Axis of Symmetry: _____

Domain: _____

Range: _____

9. $y = 3x^2 - 4$



Vertex: _____

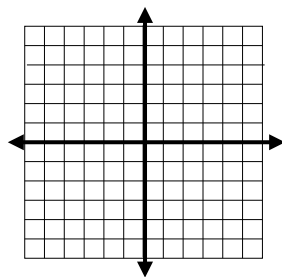
Increasing: _____

Decreasing: _____

Max or Min? _____

Max/Min Value: _____

10. $y = -(x + 1)^2 + 4$



Vertex: _____

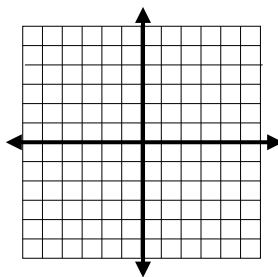
Axis of Symmetry: _____

x-ints: _____

Domain: _____

Range: _____

11. $y = \frac{1}{4}(x - 3)(x + 5)$



x-ints: _____

Axis of Symmetry: _____

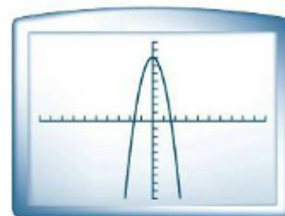
Vertex: _____

y-int: _____

[12-14] Given the functions, match them to the correct graph.

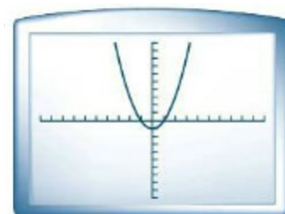
12. $y = x^2 - 1$

A.



13. $f(x) = -3x^2 + 8$

B.



14. $f(x) = -0.2x^2 + 5$

C.

