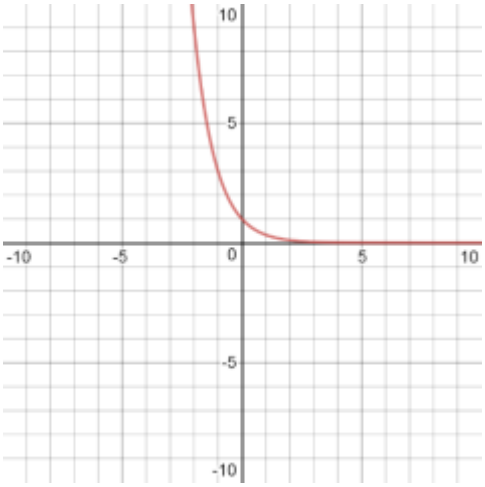
Name _____ **Class** ____ **Date** _____

Alg II ● Mr. Dull ● 8.1 – 8.4 Review Problem Set

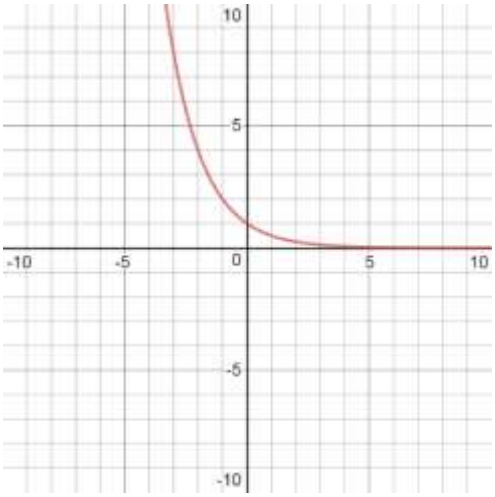
Without using a calculator, match each function with its graph. Explain your reasoning.

1. $f(x) = \left(\frac{1}{3}\right)^x$ _____ Why? _____
2. $f(x) = 2^x$ _____ Why? _____
3. $f(x) = \left(\frac{1}{2}\right)^x$ _____ Why? _____
4. $f(x) = 3^x$ _____ Why? _____

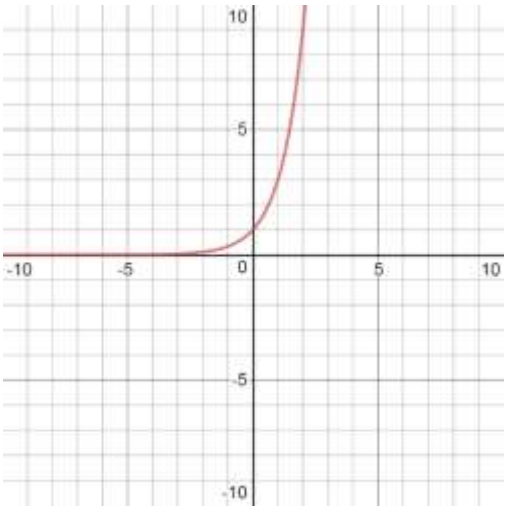
A



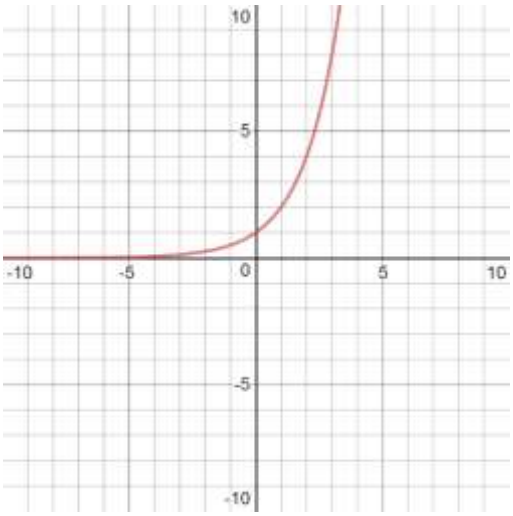
B



C



D



Write the inverse for the relation. Is the inverse a function?

5. { (1, -3), (-2, 3), (5, 1), (6, 4) }

6. { (-5, 7), (-6, -8), (1, -2), (10, 7) }

Write the inverse of the function:

7. $f(x) = 3x + 2$

8. $f(x) = \frac{2}{3}x - 5$

9. $y = (x + 3)^2$

10. $f(x) = \sqrt{x + 5}$

Let $f(x) = 2x - 1$, $g(x) = 3x$, and $h(x) = x^2 + 1$. Compute the following:

11. $h\big(g(2)\big)$

12. $h(f(x)$

Let $f(x) = 2x - 1$, $g(x) = 3x$, and $h(x) = x^2 + 1$. Compute the following:

13. $g(f(0))$

14. $f(f(2)$

Solve the equation:

15. $2^{2x+2} = 2^{3x}$

16. $5^{3-2x} = 5^{-x}$

17. $4^{2x+3} = 1$

18. $3^{1-2x} = 243$

Write 3 different combinations of base and exponent that equal 64:

19.	20.	21.

What have you learned this week in class that I did not ask you to practice on this review page?

What percentage of your day do you spend at school? Show your work.

Triangle or party cut?

Anything else you want me to know today?