

Name: _____

Quiz 2.1.1-2.2.2 Practice Quiz and Review

Factor the following expressions in questions 1-4.

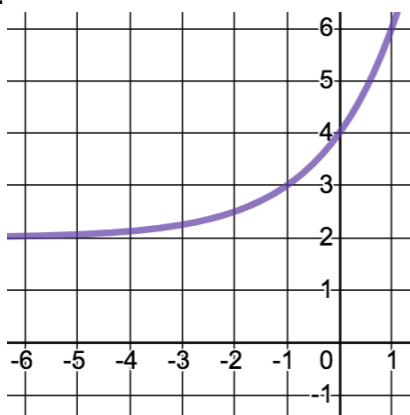
1. $x^2 + 3x - 4$

2. $x^2 - 7x - 18$

3. $x^2 - 9x + 8$

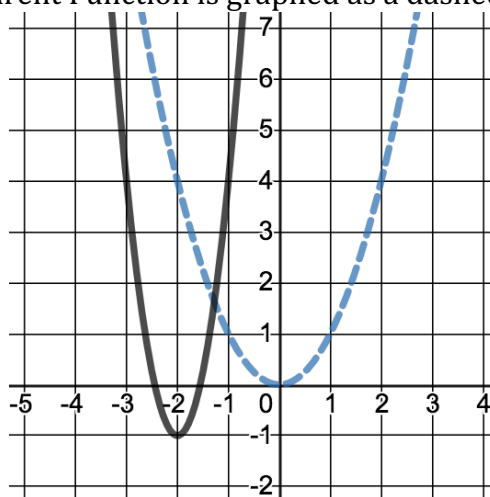
4. $x^2 - 16x + 63$

5. The function $f(x) = 2(2)^x$ was replicated with $f(x) + k$ resulting in the function graphed below:



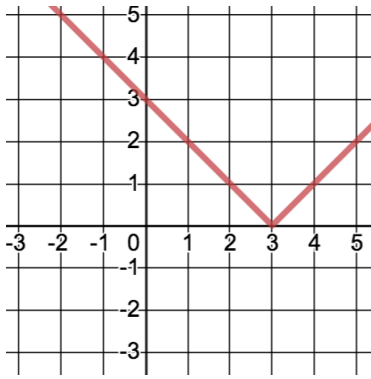
What is the k value?

6. Identify ALL the transformations that have occurred to the parent function below?
(Parent Function is graphed as a dashed line)

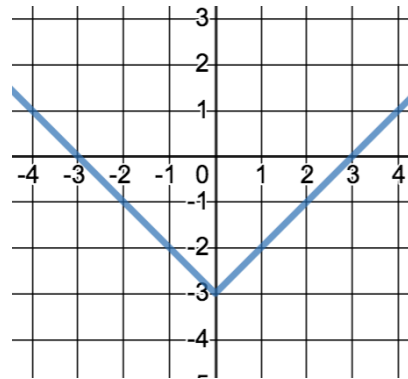


Write an equation for the graphs given in questions 7-12.

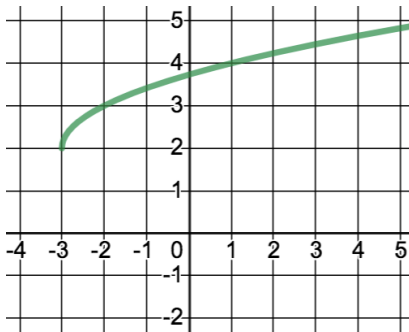
7.



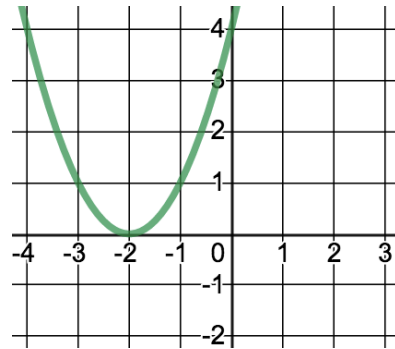
8.



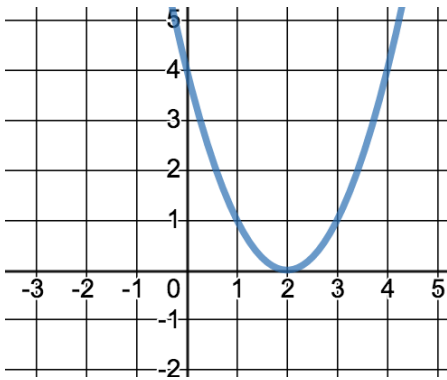
9.



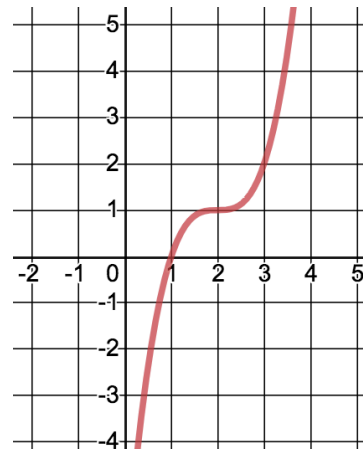
10.



11.



12.



State the transformation of the following equations

13. $y = (x - 2)^3$

14. $y = x^3 - 2$

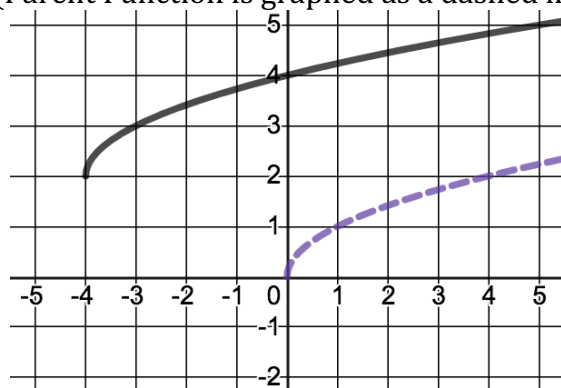
15. $y = (x + 2)^3 - 2$

16. $y = \frac{1}{x} + 4$

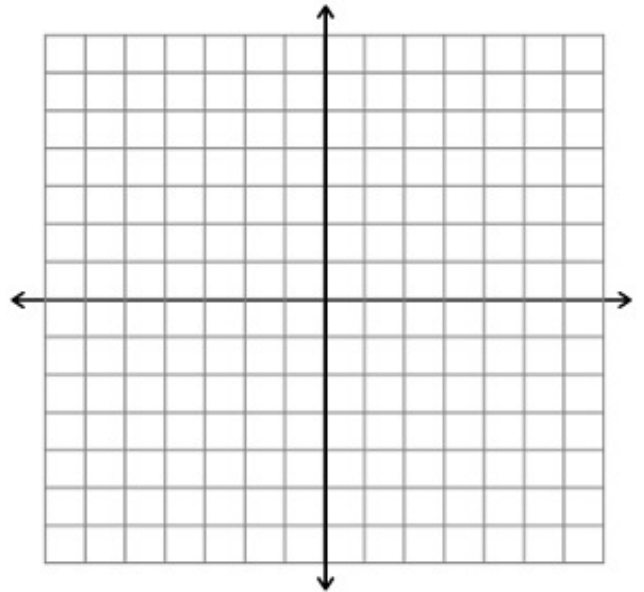
17. $y = \frac{1}{x} - 4$

18. $y = \frac{1}{x-4}$

19. Identify ALL the transformations that have occurred to the parent function below?
(Parent Function is graphed as a dashed line)



20. Graph the locator point (h, k) of the function $f(x) = \sqrt[3]{x+3} - 2$ then draw in a sketch of the shape of that graph.



21. What is the name of the parent function whose transformed graph is: $y = \sqrt[3]{x + 2}$?

22. Write an equation in the form $y = (a)\frac{1}{x-h} + k$ that has a transformation of: Left 1, Up 4, and a Vertical stretch of 3.

23. Write an equation in the form $y = (a)2^{x-h} + k$ that has a transformation of: Right 10, Up 7, and a Vertical compression of 0.13.

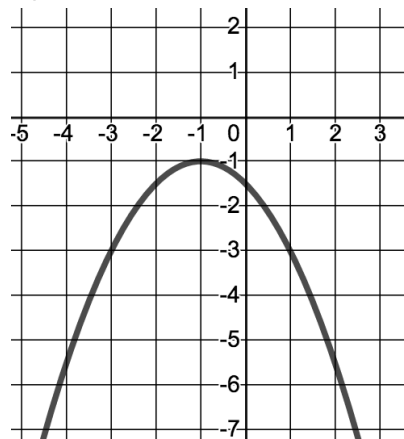
24. Write an equation in the form $y = a(x - h)^3 + k$ that has a transformation of: Left 2, Down 8, and a reflection over the $x - axis$.

25. The graph of $y = 3^x$ is shifted to the right 2 and has a reflection over the $x - axis$. What will be the new equation?

26. Write an equation in the form $y = a(x - h)^2 + k$ that has a transformation of: Left 7, Up 2, vertical stretch of 3, and a reflection over the $x - axis$.

What are the domain and range of the following graphs?

27.



28.

