Integrated 3 Lesson 5.2.3 Assignment

Name: Date: Period:

5-78. If $x = 7^y$, how would you write this equation in y = form? Explain. Homework Help ✎

5-79.

Krista was staring at the problem below with a confused look at on her face.

$$\log_6 6^{11} = ?$$

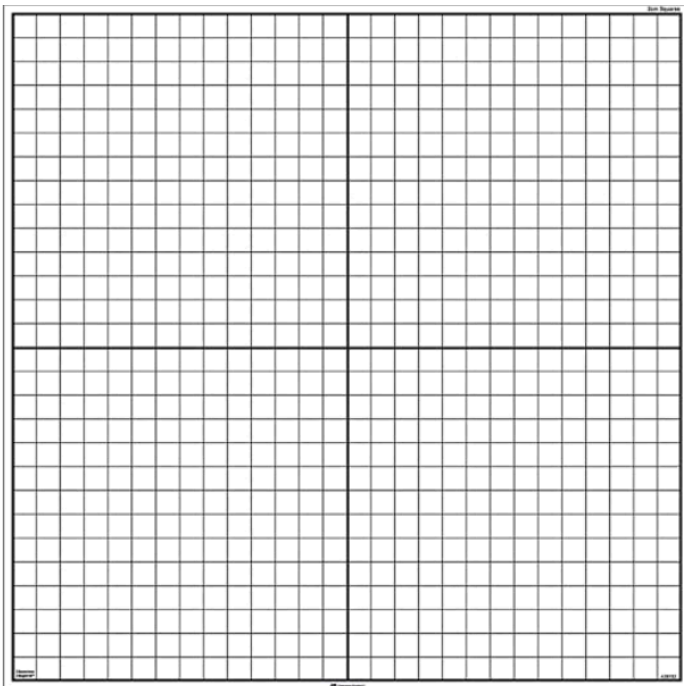
"What's the matter?" asked Jonique. *"It seems like the answer should be easy but I keep going around in circles in my mind,"* Krista replied. Jonique chuckled. *"Yeah, it's just like asking 'What is the name of the boy whose name is Bob?'"* she laughed. Unfortunately, this did not help Krista at all. Can you help her? Explain to Krista what the expression above equals and why, and how it relates to Jonique's question about Bob. Homework Help ✎

5-81. This problem is a checkpoint for transformations of functions. It will be referred to as

Checkpoint 5. Make a complete graph of each function below without using a graphing calculator. State the family of functions, and describe how each coefficient in the equation transforms the location or shape of the graph in relation to the parent function. Homework Help ✎

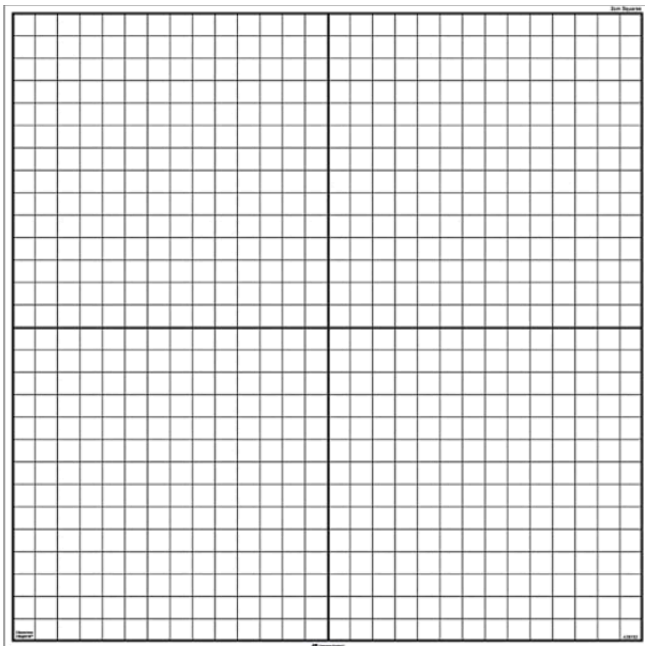
a. $f(x) = \frac{1}{x-3} + 4$

- Parent function:
- Vertical Transformation:
- Horizontal Transformation:
- Vertical stretch or compressed:



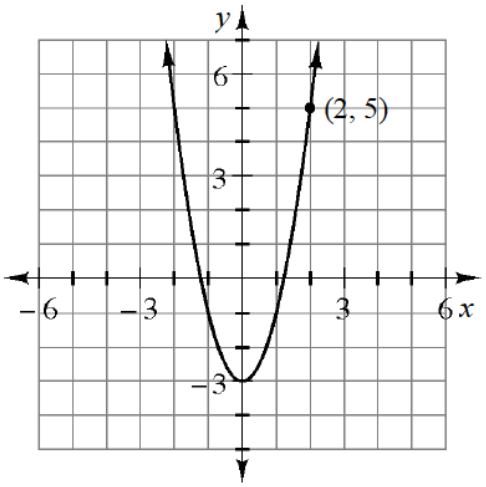
b. $f(x) = 3\sqrt{x}$

- Parent function:
- Vertical Transformation:
- Horizontal Transformation:
- Vertical stretch or compressed:

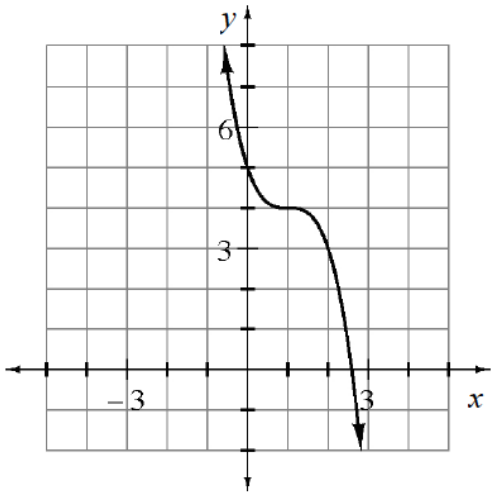


Write an equation in graphing form for each graph below.

c.



d.



5-83. Solve each of the following equations for x. Homework Help ✎

a. $x^3 = 243$

b. $3^x = 243$

5-84. Given f(x) = $-2x^2 - 4$ and g(x) = 5x+3: Homework Help ✎

a. What is f(–7)?

b. What is g(–2)?

c. If f(x) = c, what is x?

d. If g(x) = c, what is x?

e. Write an equation for g^{-1} (x).