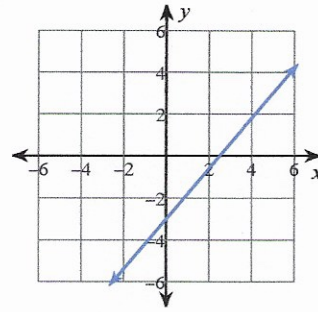


# Answers to #7.0b

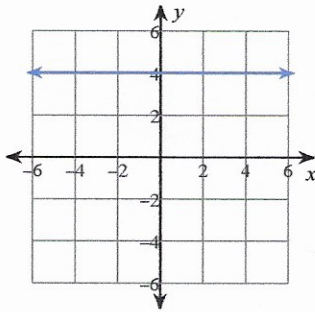
1)  $\{-3\}$

2)  $\{5\}$

3)



4)



5)  $x \leq 9$ :

6)  $x < 4$ :

7)  $y - 3 = -\frac{5}{2}(x + 3)$  or  $y + 2 = -\frac{5}{2}(x + 1)$

8)  $y = -3x - 10$

9)  $(0, -2)$

10)  $(-8, -7)$

Determine whether the following represents a relationship that is linear, exponential growth, exponential decay, or none of these.

11.  $y = 8x^3$  *None of these*

12.  $y = 2.67(1.13)^x$  *Exponential growth*

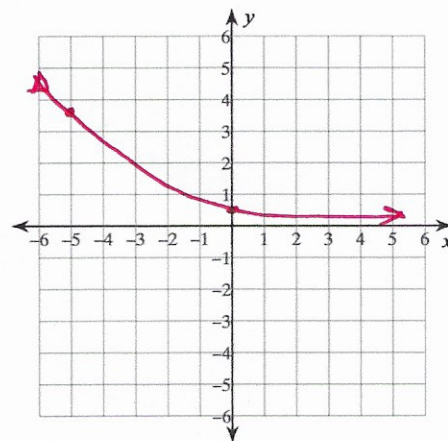
Evaluate the function for the given value of x

11.  $y = 3(6)^x$  for  $x = 4$  *3888*

14.  $y = 6(3)^x$  for  $x = -2$   *$\frac{2}{3}$*

Graph the function:

15.  $f(x) = \frac{1}{2} \left(\frac{2}{3}\right)^x$



Write a function that represents the situation.

16. Math Club t-shirt sales began at 1,200 and increase by 8% each year.

*$y = 1200(1.08)^t$*

17. An SAT prep course had 236 participants but decreased by 13% every year.

*$y = 236(1 - .13)^t$*

Write an explanation to match the given exponential function:

18.  $y = 801(1.12)^t$  *There were 801 humming birds in our neighborhood and the population increased 12% each year*

Write an exponential function for the given data:

19.

x	y
-2	$\frac{343}{144}$
-1	$\frac{49}{12}$
0	7
1	12
2	$\frac{144}{7}$

*$y = 7\left(\frac{12}{7}\right)^x$*

20.

x	y
-2	.171875
-1	1.375
0	11
1	88
2	704

*$y = 11(8)^x$*