Lesson 2.2 Assignment Name:_____

Based on each of the given representations of a function, determine the following.

1) The population of a town, y, is 15,000 people and is growing by 1.5% per year.
    a. Is this linear or exponential? Justify your choice.

    b. Is this discrete or continuous?

    c. Identify an appropriate domain.
        i. Real Numbers
        ii. Positive Real Numbers
        iii. Integers
        iv. Positive Integers

    d. Write the explicit equation.

2) Joan earns a starting salary of $30,000 per year and will receive a raise of $2,500 per year for the first 10 years.
    a. Is this linear or exponential? Justify your choice.

    b. Is this discrete or continuous?

    c. Identify an appropriate domain.
        i. Real Numbers
        ii. Positive Real Numbers
        iii. Integers
        iv. Positive Integers

    d. Write the explicit equation.

3) A sequence starts at 60 and decreases by 14% each term.
    a. Is this linear or exponential? Justify your choice.

    b. Is this discrete or continuous?

    c. Identify an appropriate domain.
        i. Real Numbers
        ii. Positive Real Numbers
        iii. Integers
        iv. Positive Integers

    d. Write the explicit equation.

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4) Benjamin can clean 3 square feet of space per minute.
   a. Is this linear or exponential? Justify your choice.

   b. Is this discrete or continuous?

   c. Identify an appropriate domain.
      i. Real Numbers
      ii. Positive Real Numbers
      iii. Integers
      iv. Positive Integers

   d. Write the explicit equation.

Solve each of the following equations.

5) $1x + 16 = 36$

6) $425x = 850$

7) $\frac{1}{6}x = 10$

8) $-\frac{4}{7}x = -1$

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Find the rate of change (slope) in each of the problems.

9) .

x	$g(x)$
-5	11
-3	4
-2	0.5
0	-6.5

10) .

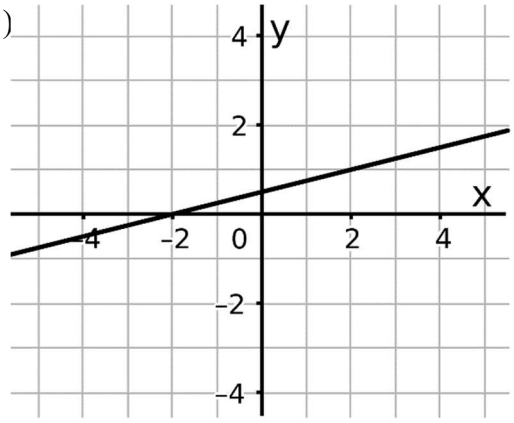
t	$h(t)$
3	13
8	23
18	43
23	53

11) .

n	$f(n)$
-7	20
-5	24
-1	32
2	38

12) $(2, 5), (8, 29)$

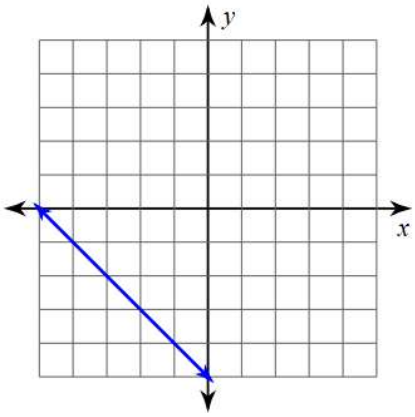
13)



14) $(-3, 7), (8, 29)$

Write the equation of the line in slope-intercept ($y = mx + b$) form.

15)



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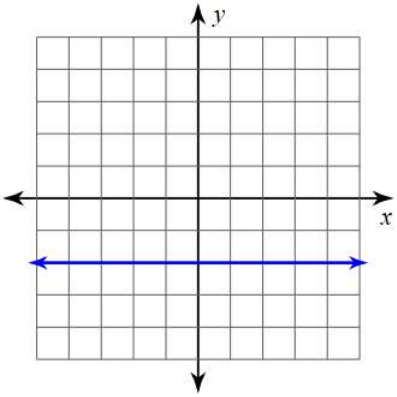

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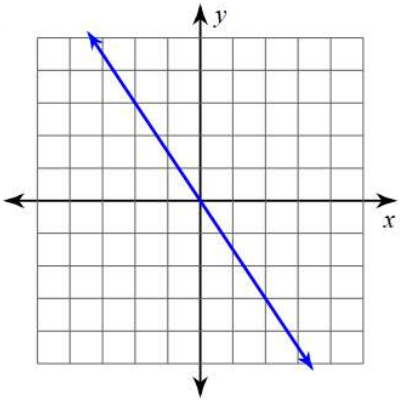
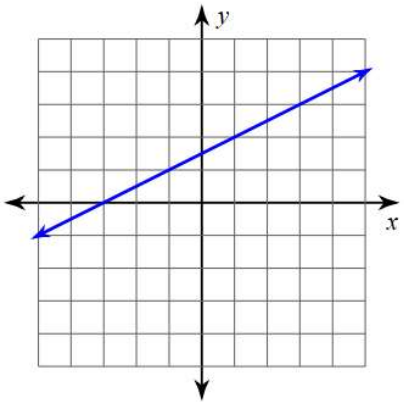
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