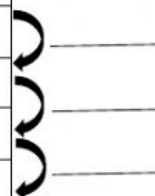Name: _____

Chapter 4.1 – 4.3 Quiz: Linear Relations

1. The pattern in the table below continues.
   a) Write an equation that relates v to t.

Term Number, t	Equation: ____ = ____ ____ ▢ ____	Term Value, v
1	____ = ____ ____ ▢ ____	7
2	____ = ____ ____ ▢ ____	11
3	____ = ____ ____ ▢ ____	15
4	____ = ____ ____ ▢ ____	19
20	____ = ____ ____ ▢ ____	
	____ = ____ ____ ▢ ____	51

   b) Find the term value of the 20th term.
      *show your answer in the chart

   c) Which term would have a value of 51?
      *show your answer in the chart

2. A taxi company charges a fixed rate of $3 plus $1.50 per kilometer.
   a) Create table of values to show the total you would pay for the first 4 kilometers.

number of km, x	Equation: ____ = ____ ____ ▢ ____	total paid, y
1	____ = ____ ____ ▢ ____	
2	____ = ____ ____ ▢ ____	
3	____ = ____ ____ ▢ ____	
4	____ = ____ ____ ▢ ____	
15	____ = ____ ____ ▢ ____	
	____ = ____ ____ ▢ ____	40.50

   b) How much would it cost to drive 15 km?
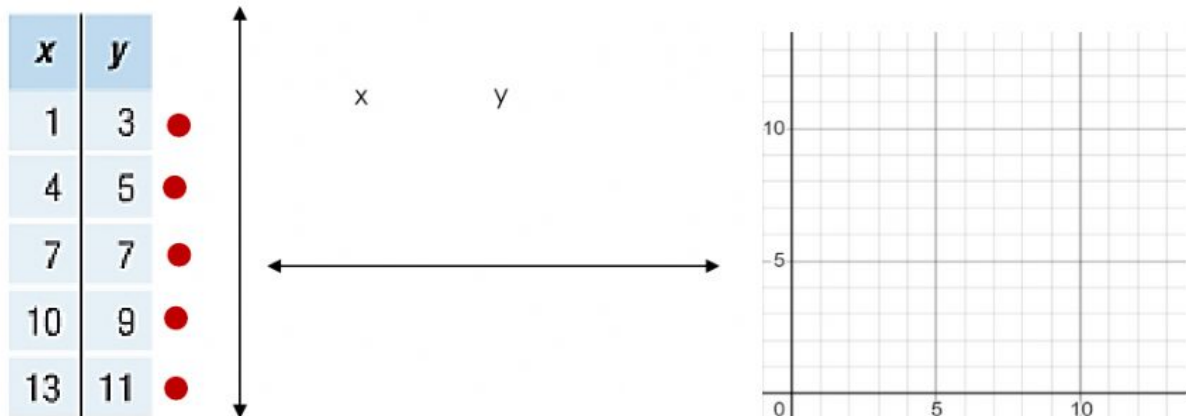   *show your answer in the chart

   c) How far did you go if the total was $40.50?
      *show your answer in the chart

3. Graph the following linear relation using all the information in the table.
   a) Drag and drop the arrows and the variables x and y to label the x and y axes.
   b) Drag and drop the red dots to the correct point on the graph.

x	y
1	3
4	5
7	7
10	9
13	11

x   y

4. Classify the following lines as Vertical, Horizontal or Oblique.

   a) $x = 2$

   b) $y = 4$

   c) $y = 2x + 3$

   d) $x + 5 =$

   d) $-3 = y$

   f) $14x + 7y = 21$

   g) $-3x + y = 9$

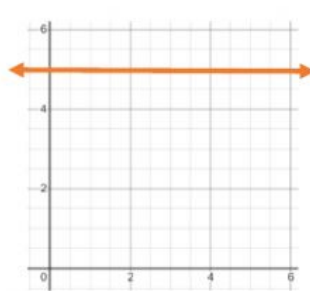   **h)** $y + 2 = 3$

5. Which equation describes each graph below?

   a)

   b)

   c)
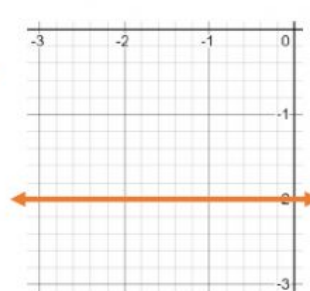
   d)
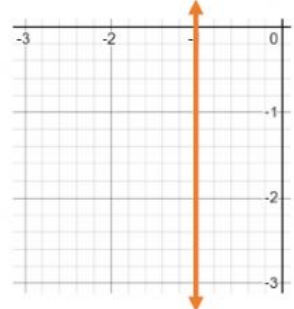
Name: _____

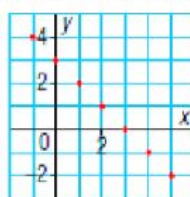**6.** Indicate which of the following are linear and which are non-linear. Explain how you know.

a)

x	y
-2	2
0	8
2	16
4	32

b)

x	y
1	-3
2	-6
3	-9
4	-12

c)

d)
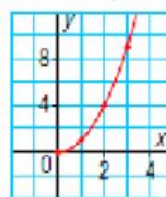
e) $x - 3y = 2$

f) $x^2 - 3x + 2 = y$

g) (2, 6), (1, 8), (0, 10), (-1, 12)

h) (5, 10), (10, 5), (5, 0), (10, -5)