MATH 9 - Unit 4 Quiz – Version 3   Name: _____

Multiple Choice
Identify the choice that best completes the statement or answers the question.

____ 1. This pattern of unit squares continues. Which equation below relates the number of squares, *n*, to the figure number, *f*?

Figure 1   Figure 2   Figure 3
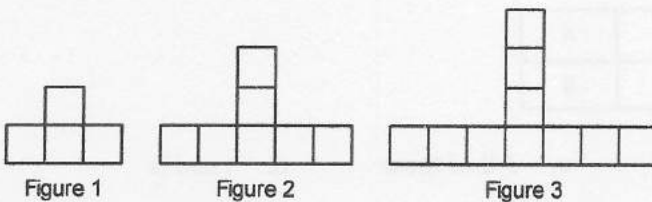
i) $n = 3f + 4$
ii) $n = 3f + 1$
iii) $f = 3n + 1$
iv) $f = 4 + 3n$

a. iii   b. ii   c. iv   d. i

____ 2. The cost to print stickers is $6.55, plus $0.55 per sticker.
Determine an equation that relates the total cost, *C* dollars, to the number of stickers, *s*.
a. $C = 0.55s$ b. $C = 6.55 + s$ c. $C = 6.55 + 0.55s$ d. $C = 7.1s$

____ 3. Which tables of values represent a linear relation? (Look for constant patterns for x and y)
     i)

x	1	2	3	4	5
y	4	7	12	19	28

     ii)

x	0	1	2	3	4
y	0	5	10	15	20

     iii)

x	1	2	3	4	5
y	5	9	13	17	21

     iv)

x	0	1	2	3	4
y	12	11	10	9	8

     a.   ii, iii, and iv   b.   ii and iii   c.   All of these   d.   i and iv

____ 4. Which graph represents the equation $y = 2x + 3$? In order to solve this, make a table of values starting at x= 0
     to x = 5, then determine which line represents the values on the table.
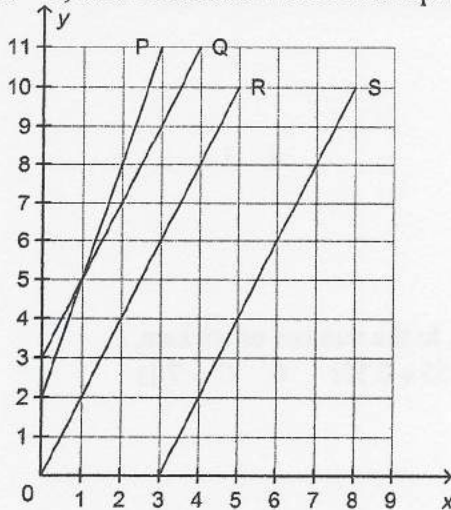
     a.   Line S   b.   Line Q   c.   Line P   d.   Line R

_____ 5. Complete the table of values. (Substitute the variable with the value given)

$y = 9 - 5x$

x	2	4	6	8
y				

a.

x	2	4	6	8
y	4	−1	−6	−11

c.

x	2	4	6	8
y	4	8	12	16

b.

x	2	4	6	8
y	8	16	24	32

d.

x	2	4	6	8
y	−1	−11	−21	−31

_____ 6. Which table of values represents the equation $y = 11 - 4x$? (Do as above)

a.

x	−2	−1	0	1	2
y	5	6	7	8	9

c.

x	−2	−1	0	1	2
y	3	7	11	15	19

b.

x	−2	−1	0	1	2
y	19	15	11	7	3

d.

x	−2	−1	0	1	2
y	−14	−7	0	7	14

_____ 7. Which line is the graph of $x + 5 = 0$? (Remember: You must solve for *x, or isolate x. This means x has to be by itself in one side of the "=" sign*)
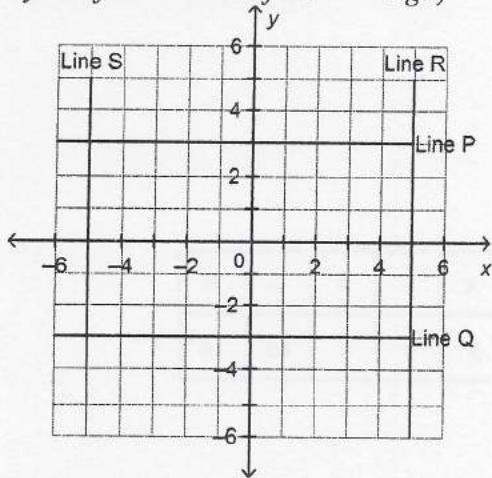
a.   Line R   b.   Line Q   c.   Line P   d.   Line S

_____ 8. For the equation $4x - 2y = 8$, isolate or solve for *y* using algebra, and then choose the correct table of values for $x = -2$, 0, and 2.
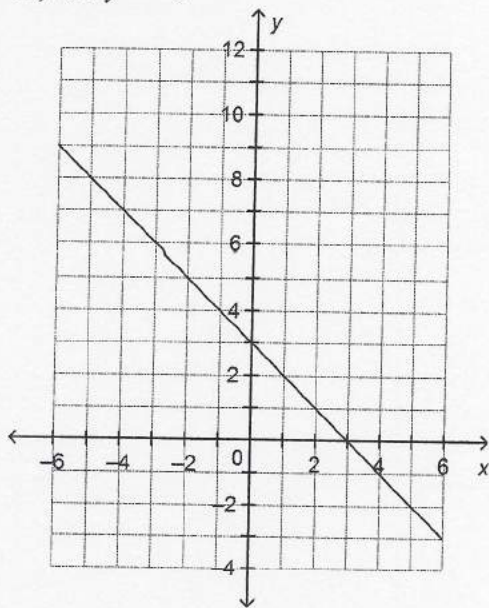
a.

x	-2	0	2
y	-8	-4	0

c.

x	-2	0	2
y	8	4	1

b.

x	-2	0	2
y	-8	0	1

d.

x	-2	0	2
y	0	-4	8

_____ 9. Which equation describes the graph? (For each equation, you must isolate a variable, and then make a table of values)
   i) $x + y = 3$
   ii) $x - y = 3$
   iii) $y - x = 3$
   iv) $x + y = -3$

a. i   b. ii   c. iii   d. iv

Short Answer

10. In the equation $R = 6(w - 1) + 4$, determine the value of R when $w = 13$.

11. In a table of values for a pattern, $P = 17$ when $n = 2$. Which equation might represent the pattern?
   i) $P = 17n$
   ii) $P = 9n$
   iii) $P = 6n + 5$
   iv) $P = 17n - 9$

12. Graph these equations on the same grid. What shape is formed by the lines? (Remember to isolate teh variable. Then, draw each line individually. For our purpose, **you can join the points on the same line**)

    i) $x = -3$

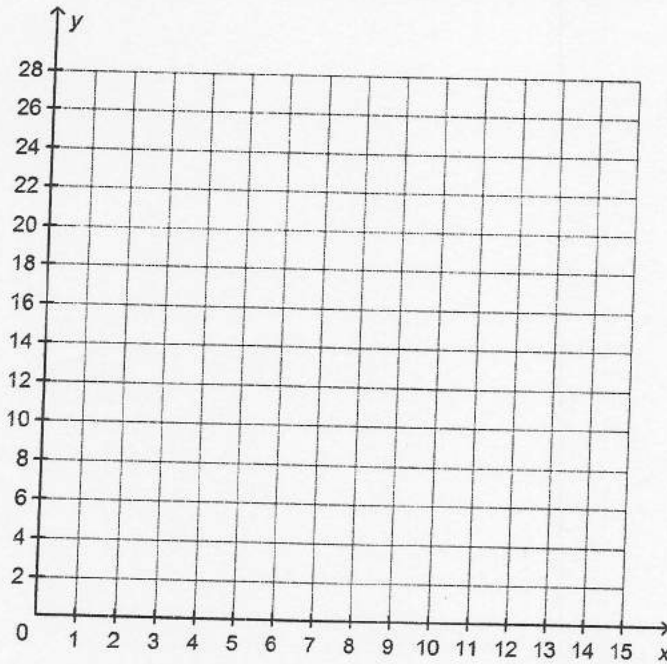   ii) $x - 5 = 0$

    iii) $y + 2 = 0$

    iv) $y - 5 = 0$
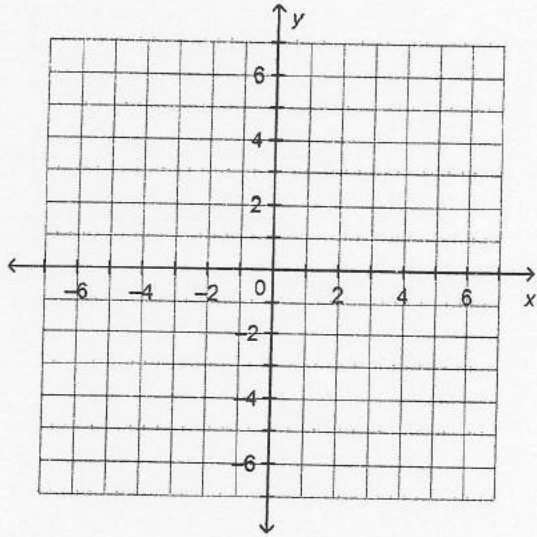
Problem

13. a) Create a table of values for the relation $y = 1.5x + 3$, then graph the relation.
Use 0, 2, 4, 6, 8, 10 as values of x.

x	0	2	4	6	8	10
y						

b) Is the relation linear? How do you know?
c) What is the value of y when $x = 33$?