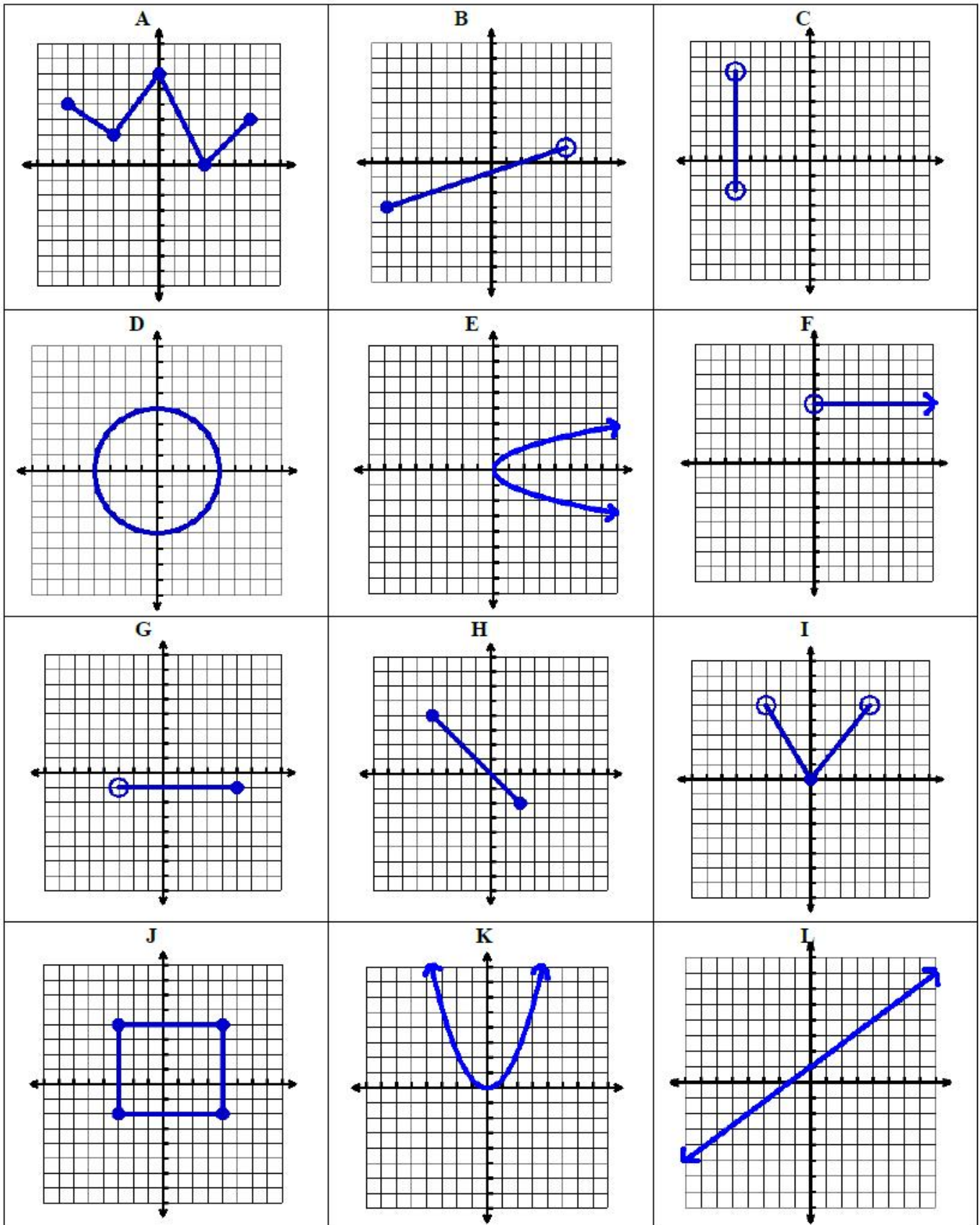


Pre-Calculus 11: Basic Skills Assignment #1

1. Match each domain and range given in this table with a graph labeled from A to L on the next page. Write the letter of the graph in the blank provided. Notice that whether the graph represents a function or not is also stated.

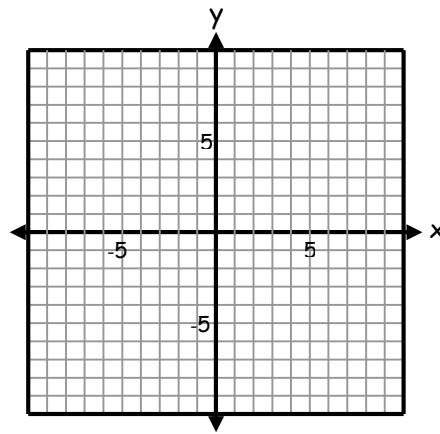
_____ 1. Domain: $\{-4 \leq x \leq 4\}$ Range: $\{-4 \leq y \leq 4\}$ Function: NO	_____ 2. Domain: $\{-3 < x \leq 5\}$ Range: $\{y = -1\}$ Function: YES	_____ 3. Domain: $\{-4 \leq x \leq 2\}$ Range: $\{-2 \leq y \leq 4\}$ Function: YES
_____ 4. Domain: $\{x > 0\}$ Range: $\{y = 4\}$ Function: YES	_____ 5. Domain: $\{-6 \leq x \leq 6\}$ Range: $\{0 \leq y \leq 6\}$ Function: YES	_____ 6. Domain: $\{x = -5\}$ Range: $\{-2 < y < 6\}$ Function: NO
_____ 7. Domain: $\{x \geq 0\}$ Range: $\{\text{all real numbers}\}$ Function: NO	_____ 8. Domain: $\{-3 \leq x \leq 4\}$ Range: $\{-2 \leq y \leq 4\}$ Function: NO	_____ 9. Domain: $\{\text{all real numbers}\}$ Range: $\{\text{all real numbers}\}$ Function: YES
_____ 10. Domain: $\{-7 \leq x < 5\}$ Range: $\{-3 \leq y < 1\}$ Function: YES	_____ 11. Domain: $\{\text{all real numbers}\}$ Range: $\{y \geq 0\}$ Function: YES	_____ 12. Domain: $\{-3 < x < 4\}$ Range: $\{0 \leq y \leq 5\}$ Function: YES



2. Complete the table of values, graph the function, and state the x and y-intercepts.

$$y = 2x + 4$$

x	y
-4	
-3	
-2	
-1	
0	
1	
2	

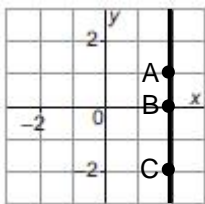


x-intercept: _____

y-intercept: _____

3. State the coordinates of the indicated points on each graph and then state the equation of each line.

a)



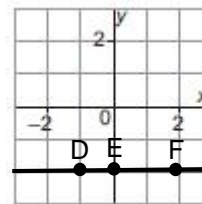
A: _____

B: _____

C: _____

Equation of the Line: _____

b)



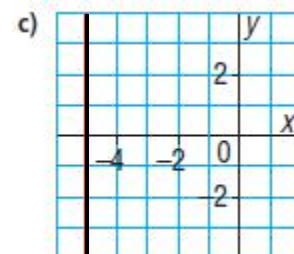
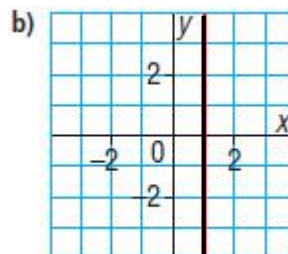
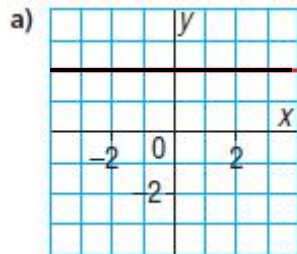
D: _____

E: _____

F: _____

Equation of the Line: _____

4. Write the equation of each line.



5. Simplify each expression.

a) $10 + 3(x + 2)$

b) $5(x + 2) + 3$

c) $\frac{10x + 15}{5}$

d) $3(x - 5)(x + 4)$

6. Rewrite each expression so the x term is first. example: $8 + 3x$ would be written $3x + 8$

a) $-5 + 2x$

b) $10 - 3x$

c) $-8 - 5x$

d) $4 - x$

7. Evaluate.

a) 5^2

b) $(-5)^2$

c) -5^2

d) $(-4)^2$

e) -4^2

8. Evaluate each expression for $x = 3$. Show work.

a) $-2x$

b) $10 - x$

c) x^2

d) $2x^2$

e) x^3

9. Evaluate each expression for $x = -3$. Show work.

a) $-2x$

b) $10 - x$

c) x^2

d) $2x^2$

e) x^3

10. Solve.

a) $x = \sqrt{25}$

b) $x^2 = 25$

c) $x = -\sqrt{25}$

d) $x^2 = -25$

e) $x^2 = 36$

f) $x^2 = 1$

g) $x^3 = 8$

h) $x^3 = -8$

Pre-Calculus 11: Basic Skills Assignment #1 - Answers

1. D1, G2, H3

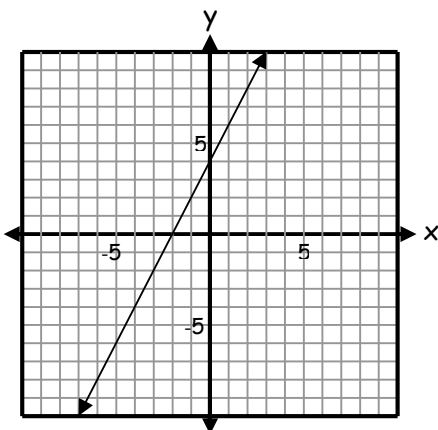
F4, A5, C6

E7, J8, L9

B10, K11, I12

2.

x	y
-4	-4
-3	-2
-2	0
-1	2
0	4
1	6
2	8



x-intercept: $(-2, 0)$

y-intercept: $(0, 4)$

3. a) $(2, 1)$
 $(2, 0)$
 $(2, -2)$
 $x = 2$

b) $(-1, -2)$
 $(0, -2)$
 $(2, -2)$
 $y = -2$

4. a) $y = 2$ b) $x = 1$ c) $x = -5$

5. a) $3x + 16$ b) $5x + 13$
 c) $2x + 3$ d) $3x^2 - 3x - 60$

6. a) $2x - 5$ b) $-3x + 10$ c) $-5x - 8$ d) $-x + 4$

7. a) 25 b) 25 c) -25 d) 16 e) -16

8. a) -6 b) 7 c) 9 d) 18 e) 27

9. a) 6 b) 13 c) 9 d) 18 e) -27

10. a) 5 b) 5, -5 Note: This is also written as ± 5 . "positive or negative 5" or "plus or minus 5"
 c) -5 d) no solution
 e) ± 6 f) ± 1 g) 2 h) -2