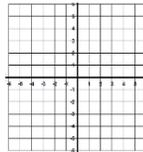
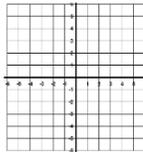
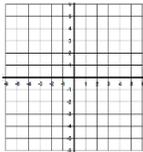


# MATH 1: SEMESTER 2 FINAL REVIEW

## Module 2 Review (Systems of Equations and Inequalities)

- List the 3 methods used to solve a system of equations
- Draw an example of a graph of a system (2 lines) that has the following number of solutions:  
a.) One                      b.) None                      c.) Infinitely Many



- Determine if the point (1, 2) is a solution to the following systems of equations and inequalities. Show work!

a.)  $\begin{cases} x + 2y = 5 \\ -3x - y = -5 \end{cases}$

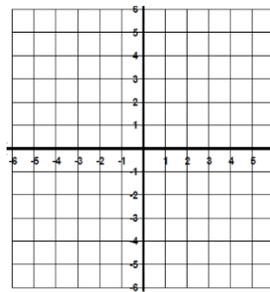
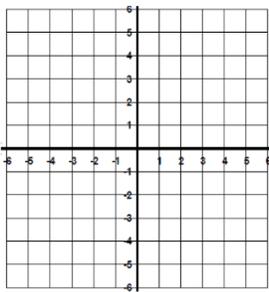
b.)  $\begin{cases} 2x - 3y < 1 \\ x + 4y \geq 9 \end{cases}$

c.)  $\begin{cases} -x + 2y > 0 \\ 2x + 3y \leq 5 \end{cases}$

- Solve the system by GRAPHING. Write your solution as an ordered pair!

a.)  $\begin{cases} y = -x + 3 \\ y = \frac{3}{2}x - 2 \end{cases}$

b.)  $\begin{cases} y = x - 1 \\ y = \frac{-2}{3}x + 4 \end{cases}$



- Solve the system by SUBSTITUTION. Write your solution as an ordered pair!

a.)  $\begin{cases} y = 2x + 10 \\ y = -2x - 6 \end{cases}$

b.)  $\begin{cases} y = -2x - 3 \\ 4y + x = 16 \end{cases}$

- Solve the system using ELIMINATION. Write your solution as an ordered pair!

a.)  $\begin{cases} 2x + 5y = -24 \\ 3x - 5y = 14 \end{cases}$

b.)  $\begin{cases} 2x + 3y = 12 \\ 5x - y = 13 \end{cases}$

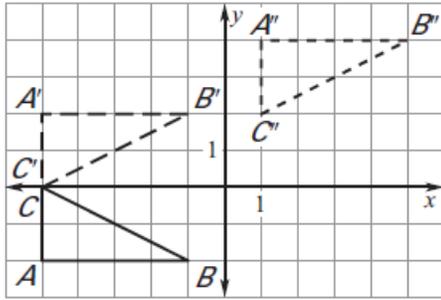
7. The school that Stefan goes to is selling tickets to a choral performance. On the first day of ticket sales the school sold 3 senior citizen tickets and 1 child ticket for a total of \$38. The school took in \$52 on the second day by selling 3 senior citizen tickets and 2 child tickets. Find the price of a senior citizen ticket and the price of a child ticket.

8. A test has twenty questions worth 100 points. The test consists of True/False questions worth 3 points each and multiple choice questions worth 11 points each. How many multiple choice questions are on the test?

**MATH 1: SEMESTER 2 FINAL REVIEW**

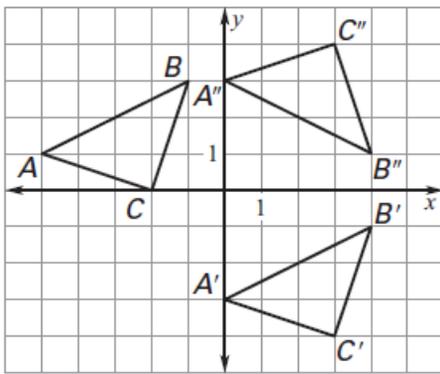
**Module 6 Review (Congruence and Proofs)**

For questions 1-2, use the diagram below.



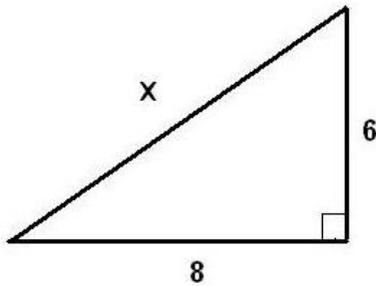
1. Describe the transformation from  $\Delta ABC \rightarrow \Delta A'B'C'$ .
2. Describe the transformation from  $\Delta A'B'C' \rightarrow \Delta A''B''C''$ .

For questions 3-4, use the diagram below.



3. Describe the transformation from  $\Delta ABC \rightarrow \Delta A'B'C'$ .
4. Describe the transformation from  $\Delta A'B'C' \rightarrow \Delta A''B''C''$ .

5. Find the value of  $x$ .

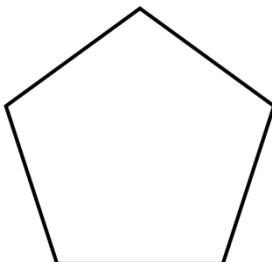


6. Given the points  $(-2, 9)$  and  $(-5, 2)$  find the **slope**.

7. Find the distance between  $(-2, -3)$  and  $(5, 1)$

8. The point  $P(-6, 3)$  is reflected across the line  $y = x$ . What are the coordinates of  $P'$ ?

9. If the point  $K = (-2, 6)$  and is rotated  $90^\circ$  clockwise about the point  $(0,0)$ , then  $K' =$



For 10-12, use the diagram to the left

10. What is the name of the **regular** polygon above?
11. How many diagonals are there on the shape to the polygon?
12. How many lines of symmetry are there on the polygon?

**MATH 1: SEMESTER 2 FINAL REVIEW**

**Module 8 Review (Probability and Statistics)**

1. Find the mean, median and mode for each set of data:

a.) 5, 30, 35, 20, 5, 25, 20

b.) 2, 1, 8, 0, 2, 4, 3, 4

2. Find the five-number summary for each set of data and use it to construct a box-and-whisker plot.

a.) 5, 30, 35, 20, 5, 25, 20

b.) 2, 1, 8, 0, 2, 4, 3, 4

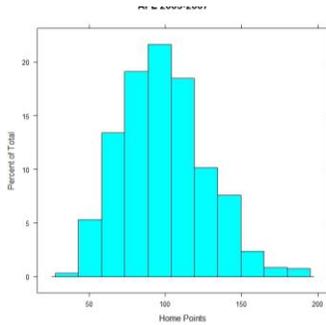
Min = Q1= Q2= Q3= Max=

Min = Q1= Q2= Q3= Max=

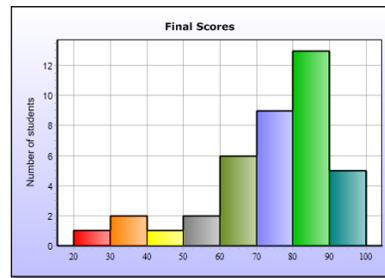


3. Describe the data in terms of shape and spread.

a.)

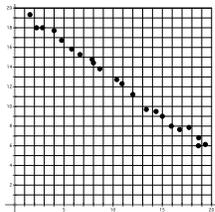


b.)

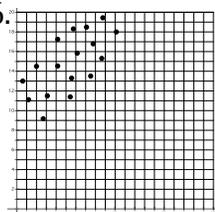


Match each of the following scatter plots with its correlation coefficient

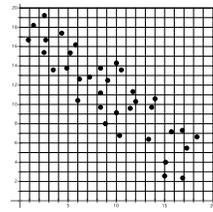
\_\_\_\_\_ 5.



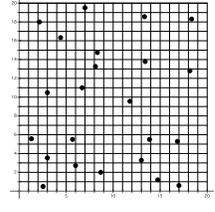
\_\_\_\_\_ 6.



\_\_\_\_\_ 7.



\_\_\_\_\_ 8.



A. -0.97

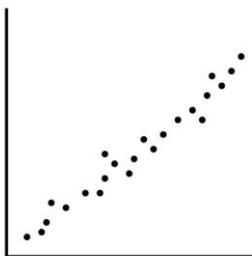
B. -0.63

C. 0.09

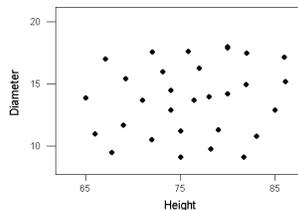
D. 0.64

9. Describe the relationship and estimate the correlation coefficient (r).

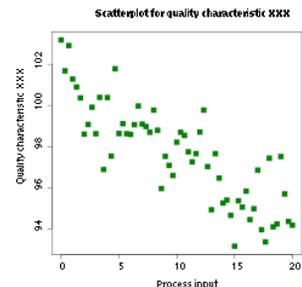
a.)



b.)



c.)



# MATH 1: SEMESTER 2 FINAL REVIEW

## Module 7 Review (Connecting Algebra to Geometry)

1. If  $f(x) = 3x - 5$ , then  $g(x) = f(x) - 4$  would move the  $f(x)$  function in which direction?
2. If  $f(x) = 6(2)^x$ , then  $g(x) = f(x) + 5$  would move the  $f(x)$  function in which direction?
3. If  $f(x) = 6(2)^x$  and  $g(x) = f(x) + 5$ , then  $g(3) =$
4. Complete the following tables based on the information given:

a.) If  $g(x) = f(x) + 3$

x	f(x)	g(x)
0	10	
1	12	
2	14	
3	16	

b.) If  $g(x) = f(x) - 4$

x	f(x)	g(x)
0	10	
1	12	
2	14	
3	16	

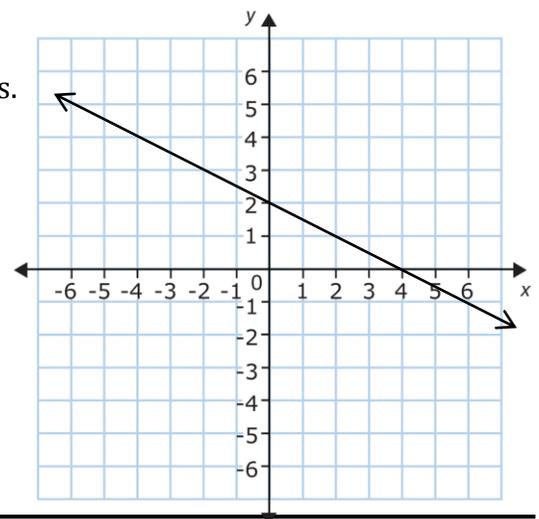
5. List ALL characteristics you must show in order to prove a quadrilateral is a parallelogram.
6. List ALL characteristics you must show in order to prove a quadrilateral is a rectangle
7. List ALL characteristics you must show in order to prove a quadrilateral is a rhombus
8. List ALL characteristics you must show in order to prove a quadrilateral is a square
9. Describe the relationship between slopes of parallel lines.

10. Describe the relationship between slopes of perpendicular lines.

11. Write the equation of the line on the graph.

12. Write the equation of AND graph a line parallel to the given line.

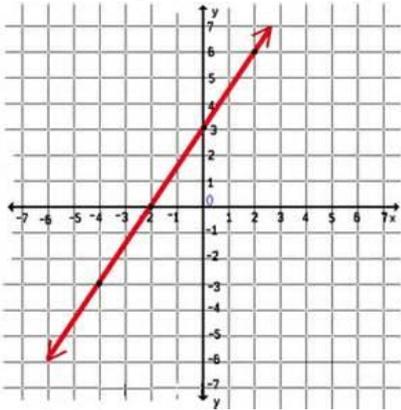
13. Write the equation of AND graph a line perpendicular.



# MATH 1: SEMESTER 2 FINAL REVIEW

## Semester 1 Review

1. Write an equation for the graph shown.



2. Rewrite the equation  $20x - 5y = 15$  in slope-intercept form.

3. State whether the sequence is arithmetic, geometric or neither.

2, 4, 6, 8, 10, ...

4. State whether the sequence is arithmetic, geometric or neither.

2, 4, 8, 16, 32, ...

5. Identify the next two terms in the sequence.

2, 4, 8, 16, 32, ...

6. Identify the next two terms in the sequence.

32, 16, 8, 4, 2, ...

7. Find  $f(20)$  for  $f(n) = -2n + 6$

8. Write the recursive formula for the sequence.

2, 4, 6, 8, 10, ...

9. Write the recursive formula for the sequence.

2, 4, 8, 16, 32, ...

10. Write the explicit formula for the sequence.

2, 4, 6, 8, 10, ...

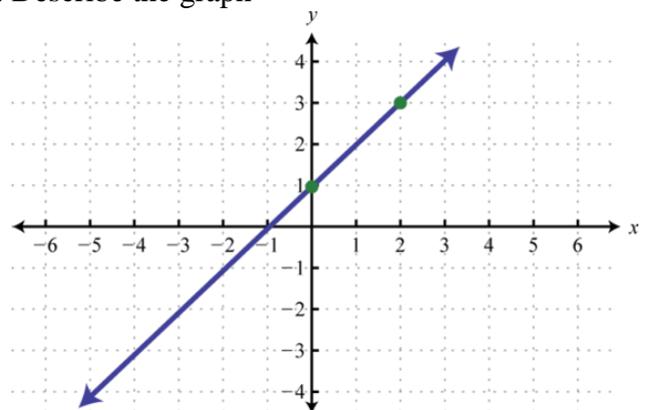
11. Write the explicit formula for the sequence.

2, 4, 8, 16, 32, ...

12. Identify the rate of change.

x	y
2	2
4	12
7	27
11	47

13. Describe the graph



14. Describe the graph

