

Second Semester Math 1 Final Exam Review

Module 2 Review

The same equation has been represented in many different ways below. For questions 1-4 decide if each representation is:

a) *Slope-Intercept form*

b) *Standard form*

c) *Neither*

1. $y = \frac{1}{3}x - 6$

2. $y - \frac{1}{3}x = -6$

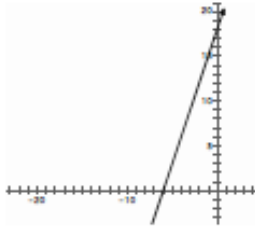
3. $-3y + x = 18$

4. $y = \frac{1}{3}(x - 3) + 5$

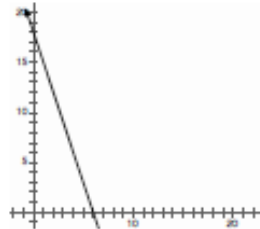
5. What is the x- and y-intercept of the equation from questions 1 - 4?

6. Which graph best represents the equation from questions 1 - 4?

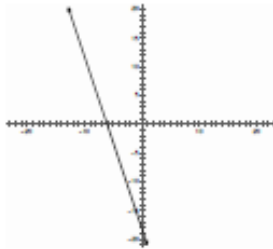
a)



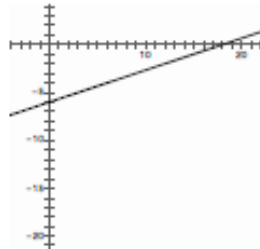
b)



c)



d)

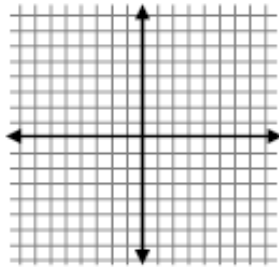


7. Find the x-intercept and y-intercept to the equation: $6x - 2y = 12$

x-intercept: _____

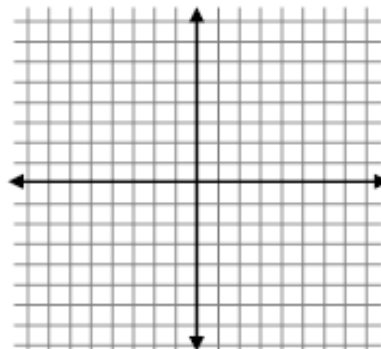
y-intercept: _____

8. Graph all of the solutions to the inequality $4x - 2y \leq 14$



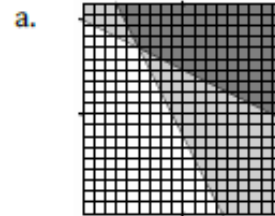
9. Solve the following system of equations using substitution, and then check your work by graphing the system of equations

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

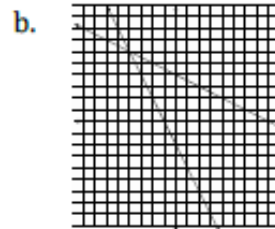


Match each system on the left with the corresponding graph on the right.

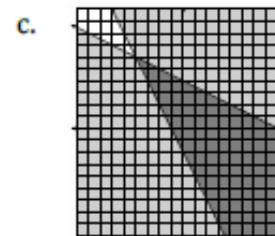
_____ 10. $\begin{cases} x + 2y = 8 \\ -4x - 2y = 4 \end{cases}$



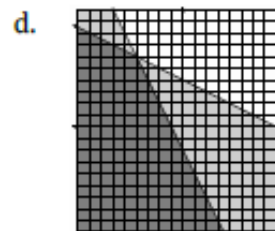
_____ 11. $\begin{cases} x + 2y \leq 8 \\ -4x - 2y \leq 4 \end{cases}$



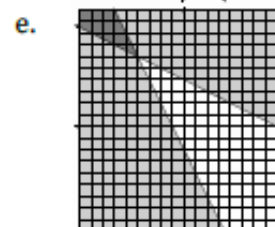
_____ 12. $\begin{cases} x + 2y \leq 8 \\ -4x - 2y \geq 4 \end{cases}$



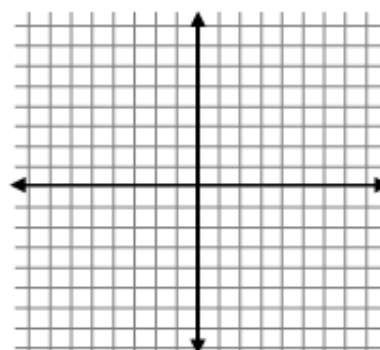
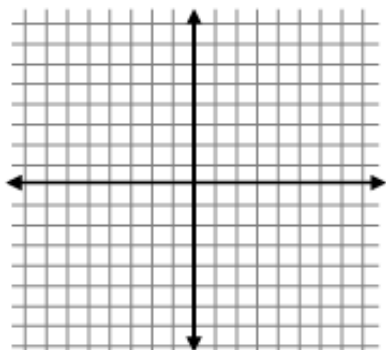
_____ 13. $\begin{cases} x + 2y \geq 8 \\ -4x - 2y \leq 4 \end{cases}$



_____ 14. $\begin{cases} x + 2y \geq 8 \\ -4x - 2y \geq 4 \end{cases}$



15. Explain how the solutions to the equation $y = 4x - 5$ and the inequality $y > 4x - 5$ are different. Be specific and use examples as well as graphs in order to receive full points.

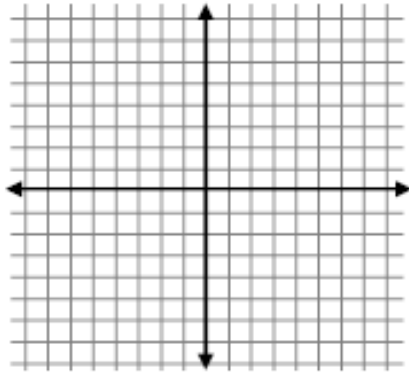


16. Solve using elimination: $2x - 3y = 4$

$$3x - 4y = 5$$

17. Solve the following system of equations using 3 different methods: $\begin{cases} -x + y = 5 \\ 3x + y = 1 \end{cases}$

Graphing:



Substitution:

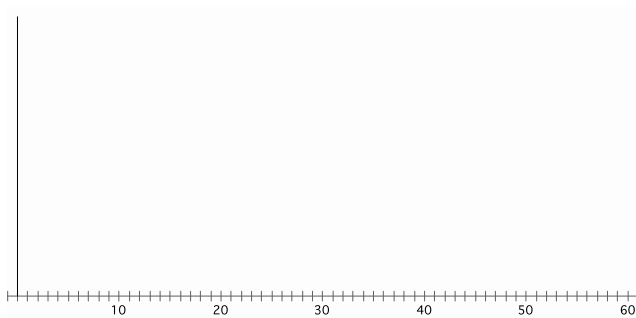
Elimination:

18. 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.

Module 8 Review

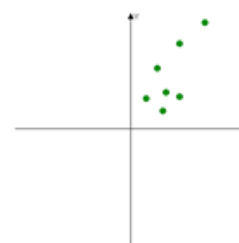
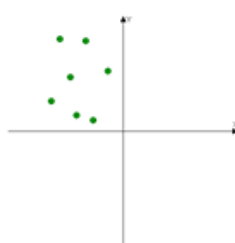
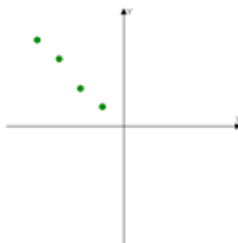
Quiz scores: 22, 54, 32, 18, 20, 31, 43, 48, 40, 60, 58, 21, 36, 8, 30, 36, 48, 52, 20

1. Create a histogram that shows the class' quiz scores. The intervals should be 10 wide. Then describe the center, shape and spread of the histogram.
- 2.



Points Scored	Frequency
1-10	
11-20	
21-30	
31-40	
41-50	
51-60	

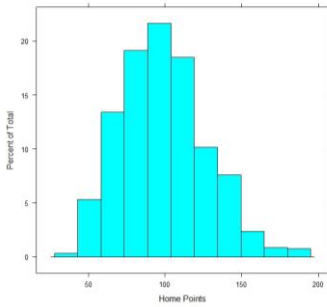
3. Estimate the correlation coefficient for the following graphs.



- 4.

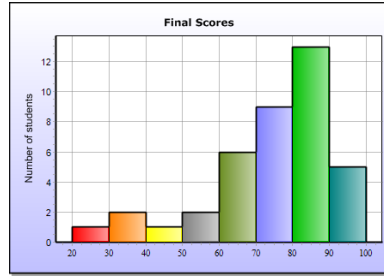
Describe the data:

Shape:
Spread:
Center:



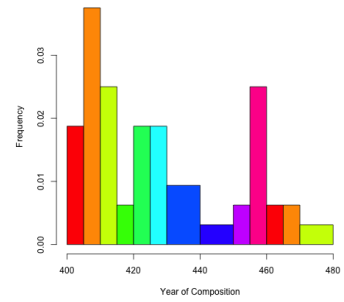
Describe the data:

Shape:
Spread:
Center:



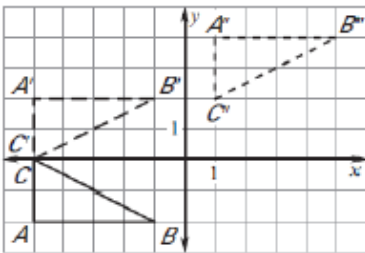
Describe the data:

Shape:
Spread:
Center:



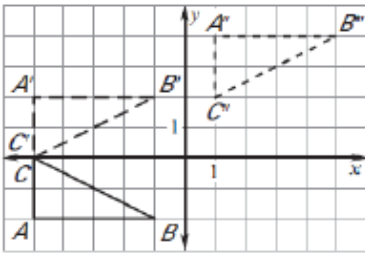
Final Review Questions from Module 6

For questions 1-2, use the diagram below.

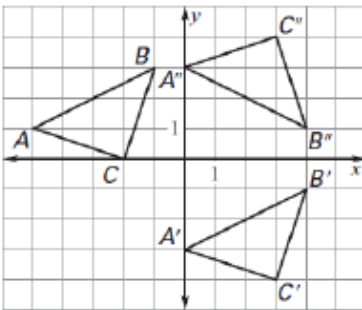


- Which of the following describes the transformation from $\triangle ABC \rightarrow \triangle A'B'C'$.
- Which of the following describes the transformation from $\triangle A'B'C' \rightarrow \triangle A''B''C''$.

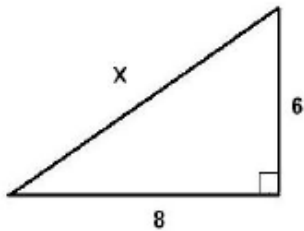
For questions 3-4, use the diagram below.



- Which of the following describes the transformation from $\triangle ABC \rightarrow \triangle A'B'C'$.
- Which of the following describes the transformation from $\triangle A'B'C' \rightarrow \triangle A''B''C''$.

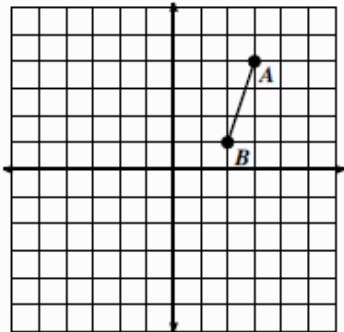


5. Find the value of x .



6. Which quadrant will \overline{AB} be in after the following transformation?

$$(x, y) \rightarrow (x + 2, y - 4)$$

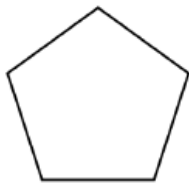


7. The point $P(-6, 3)$ is reflected across the line $y = -x$. What are the coordinates of P' ?

8. Find the sum of the measures of the interior angles of a 17-gon.

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

For 10-13, use the diagram below.



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?

13. List all angles of rotational symmetry?

14. Given the points $(-2, -3)$ and $(5, 1)$ find distance between the them.

15. If the point $K = (-2, 6)$ and is rotated 90° clockwise about the point $(0,0)$, then $K' =$

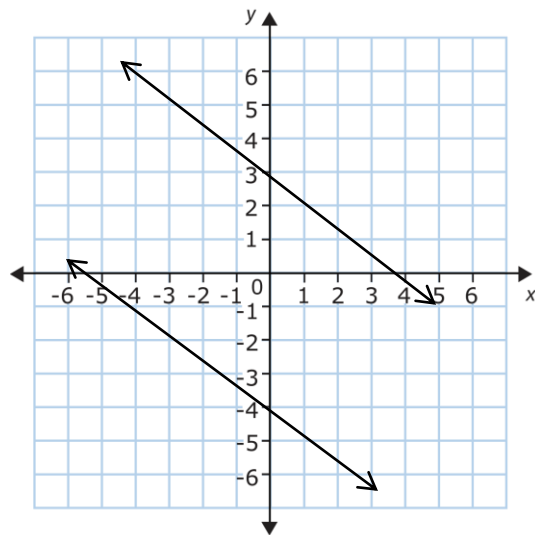
16. List two capital letters that have a vertical line of symmetry.

Module 7 Review

1. Explain what $g(x) = f(x) + k$ means.
2. If $f(x) = 5x - 3$ and $g(x) = f(x) + 9$, then $g(x) = \underline{\hspace{2cm}}$
3. If $f(x) = 9(4)^x$ and $g(x) = f(x) - 6$, then $g(x) = \underline{\hspace{2cm}}$ and then find $g(3)$.
4. Complete table: $g(x) = f(x) + 2$, if $f(x) = 4x - 5$

x	f(x)	g(x)
0		
1		
2		
3		

5. What do you have to prove that a quadrilateral is a parallelogram?
 6. What do you have to prove that a quadrilateral is a rhombus?
 7. What do you have to prove that a quadrilateral is a rectangle?
 8. What do you have to prove that a quadrilateral is a square?
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9. Use the graph above to fill out the table below

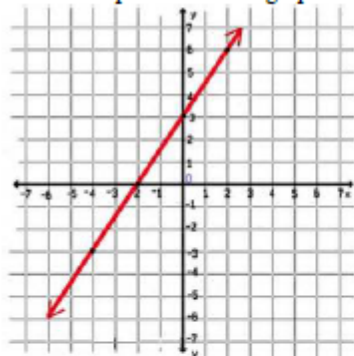
Translation Form Equation $f(x) =$ $g(x) =$

Slope intercept form equation $f(x) =$ $g(x) =$

10. What is the slope between the points $(4, -6)$ and $(-8, -12)$?
11. What is the distance between the points $(4, -4)$ and $(-2, 6)$?

Review Questions for Final

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, ...

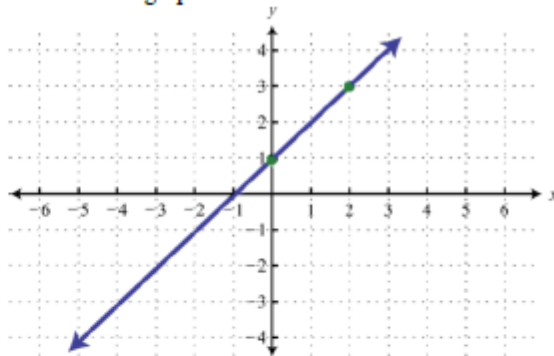
11. Write the explicit formula for the sequence.

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

