

Name _____

Math: Mrs. Roubos

Date _____

8R Period _____

8R FINAL REVIEW TAKE HOME #1:

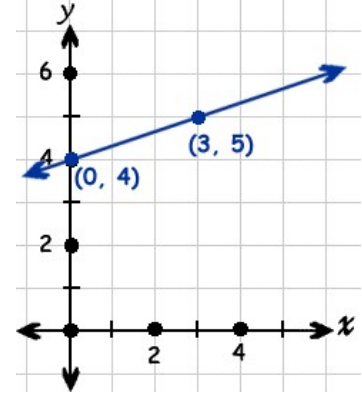
Directions: Show all work!

Due: _____

4 points each

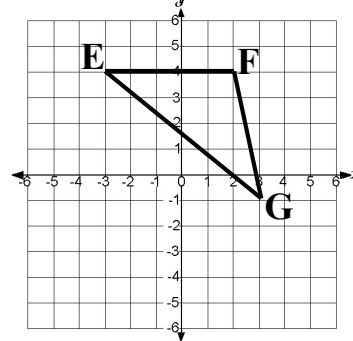
1. What is the equation for the line that passes through points (2, 6) and (0, 9)?

2. What is the rate of change of line l shown in the accompanying diagram?

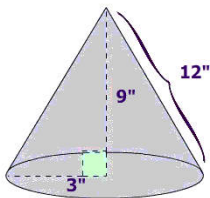


3. Matt's weekly earnings are described by the equation $y = 2x + 200$, where x is the number of hours he works. If Matt earned \$400 a week, how many hours did he work?

4. Translate (graph) Triangle EFG 3 units right and 3 units down. What are the coordinates of F'?

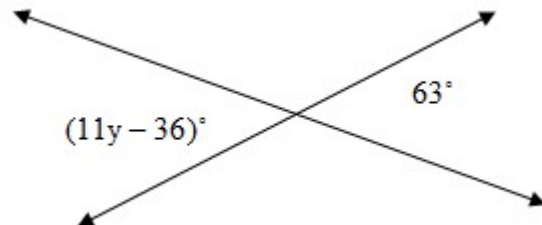


5. Find the volume of the given cone. Round to the nearest **tenth**.



$$V = \frac{1}{3} \pi r^2 h$$

6. Find the value of y in the diagram shown.



7. Which of the following is a **rational** number?

1) π

3) $\sqrt{15}$

2) $\frac{3}{5}$

4) 5.638329...

8. Point B has coordinates (5, 8). After a dilation, the coordinates of point B' are (20, 32). What is the scale factor for the dilation?

9. How many solutions does the following equation have?

$$6x + 2 = 6x + 5$$

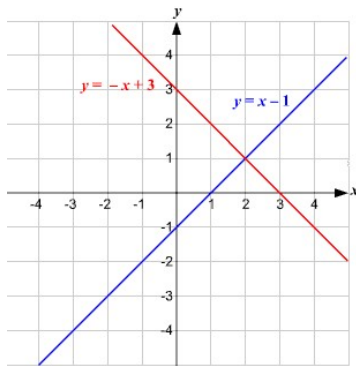
10. Does the following set or ordered pairs represent a function? Explain why or why not?

$$\{(3,6), (2,8), (6,4)\}$$

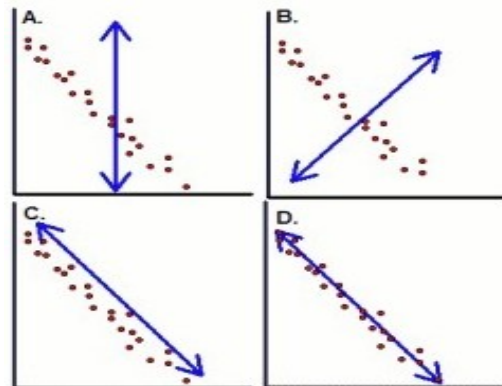
11. Express the following number in scientific notation: 0.0000062

12. Simplify: $x^8 \cdot x \cdot x^{-2}$

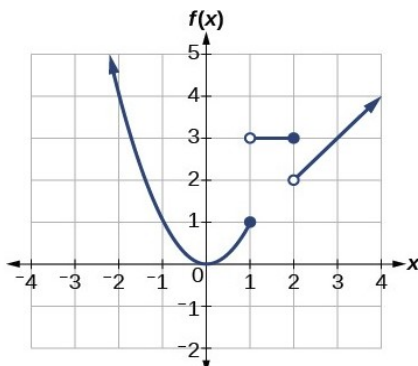
13. Which ordered pair is a solution to the system of equations shown below?



14. Which graph shows the line of best fit for the scatter plot? (Circle the correct answer)



15. In which interval is the graph below linear and increasing?



- (1) from $x = -2$ to $x = 0$
- (2) from $x = 0$ to $x = 1$
- (3) from $x = 1$ to $x = 2$
- (4) from $x = 2$ to $x = 4$