

Name _____
Mrs. Roubos

Date _____
8R Period _____

8th grade math final

Homework Day 5

1. Which of the following equations is **non-linear**?

1) $y = x + 6$

3) $y = x + 4$

2) $y = 8x$

4) $y = 5x^2 + 12$

2. Does the following relations represent a function? : $\{(3, 7), (5, 6), (3, 9)\}$

3. What is the volume of the cylinder whose radius is 4 and whose height is 6? Round to the nearest hundredth.

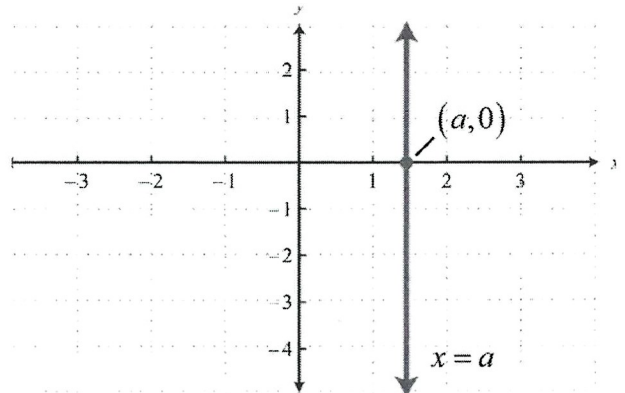
4. In terms of π , what is the volume of a sphere with a radius of 5 inches?

5. Find the volume, to the nearest cubic inch, of a **cone** with a radius of 7 and a height of 10.

6. Solve $a^3 = 343$

7. Is 123 a perfect square? Why or why not

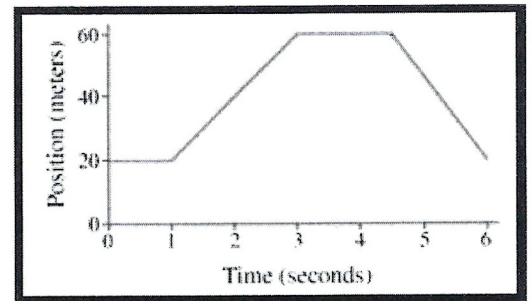
8. Does the following graph represent a function?
Is it linear or non-linear?



9. Does the following table represent a function?

x	y
2	10
6	9
10	8
14	7
18	6

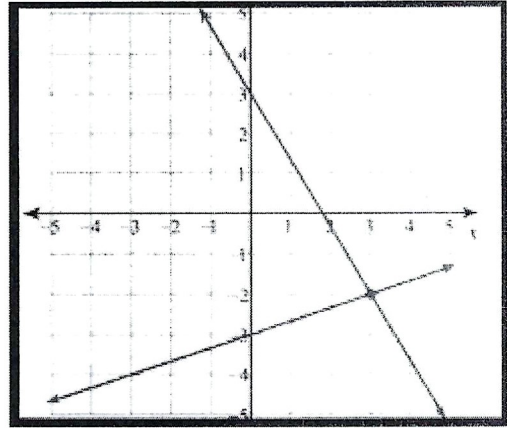
10. Describe what could be happening between 3 and 4.5 seconds?



11. How many solutions does the following equation have?

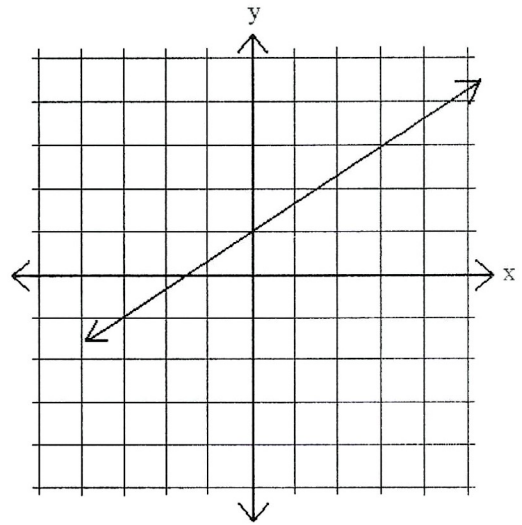
$$4x - 2 = 4x - 7$$

12. What is the solution for the following system?



13. Does $(4,6)$ lie on the graph of the equation $y = 3x - 3$?

14. What is the slope of line l shown in the accompanying diagram?



15. What is the equation for the line passing through the points $(4, 0)$ and $(0, 6)$?

16. Solve the following system for x & y .

$$10x + 5y = 10$$

$$6x - 5y = 6$$

17. Solve for x : $2.1x + 2.4 = 1.6x + 2.6$

18. If Nick walks at a speed of 21 miles in 5 hours, how many miles does Nick walk per hour?

19. What is the solution to the equation below?

$$\frac{1}{3}(9x + 18) = 21$$

20. What type of line has a slope of zero: horizontal, or vertical?