Name: _____ Date: _____ Period: _____

MIDTERM EXAM PRACTICE TEST!

Show all work and write your answer on the line provided.

1. Evaluate: $x^3 + 3(y^2 + 1)$
when $x = -2$ and $y = -5$

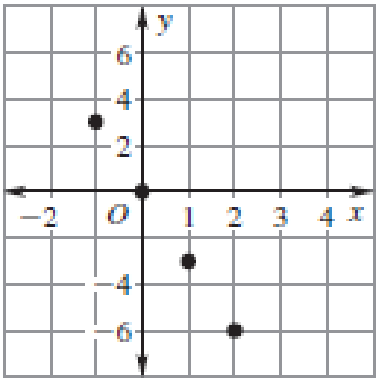
2. $1 - 4[2 + (6 - 4)^2]$

3. Is 7 a solution to $-3x + 6 > -16$?
Show or explain your answer.

4. Does the following represent a function?
Why or why not?

x	*y*
4	−2
5	−8
6	−2
7	−8

5. Identify the range of the following function:



Range: _____

Solve each equation, proportion or percent problem.

6. $-2(3x + 4) - 3x = 5x - 1$

7. $3 - x = -12$

8. $14 - 2x = -10$

9. $-\frac{2}{3}x + 5 = -11$

10. $2(2x + 3) = 6(3x + 1)$

11. $4(3x - 5) = 6(2x + 3)$

12. $\frac{2x+6}{2} = \frac{6x+2}{4}$

13. Last month, a survey of 625 students found that 130 of them wanted recess. What percent of students wanted recess?

14. Simplify $\sqrt{44}$

15. Find the x-intercept of the equation: $2y - 6x = 30$

16. Find the y-intercept of the equation $4x + 3y = 18$

17. Find the **slope** of the line passing through the points: $(-4, 1), (2, 6)$

18. Identify the slope and the y-intercept of the following equation:

$y = 4 - 3x$

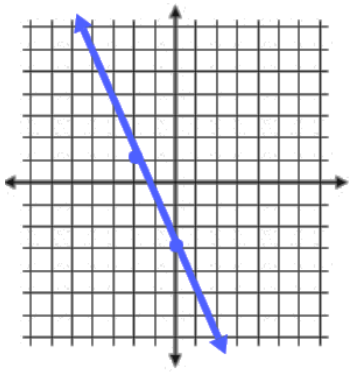
19. Write the following in slope-intercept form: $2x - 4y = 12$

Solve the following problem.

20. Find the hypotenuse of a right triangle with legs that measure 3 in. and 4 in.

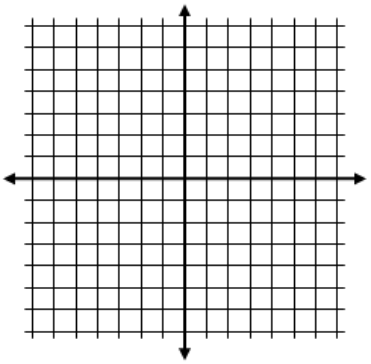
21. Could the following form a right triangle? Show or explain your work.
7, 9, 8

22. What is the **slope** of the given line?



23. Graph the following equation using slope-intercept form:

$y = -\frac{2}{3}x + 5$



24. Does the following equation represent direct variation? Why or why not?

$3x + y - 8 = 0$

25. Translate the following verbal phrase:

"Three times the difference of 5 and a number y is at most 40"