Math 042: Exam I	**Date: Oct 11, 2010**
Name: _____	**Section:** _____

1. Simplify: $8a^3 - 3a^2 - (4a^2 - 5)$

Your answer: _____ .

2. Solve for x: $-3x + 5 = -5x - 8$

Your answer: _____ .

3. Solve for x: $\frac{4}{3}x - 6 = \frac{3}{2}x$

Your answer: _____ .

4. Simplify: $\frac{(6x^2y/11)}{(9y^2/22)}$

Your answer: _____ .

5. Evaluate: $-a^2 + 3b^3$ for $a = 5$, $b = -3$.

6. Simplify: $\frac{(3xy)^2}{9x^2y^3}$

Your answer: _____ .

7. Solve the inequality: $-3(y-1) < 12$

Your answer: _____ .

8. What is the slope of the line given by the equation $x = -5$?

9. Solve for x: $ax + d = cx - b$

Your answer: _____ .

10. If 30 is 120% of a number, what is the number?

Your answer: _____ .

11. What is 20% of 75?

Your answer: _____ .

12. 6 times the sum of a number and its cube can be represented by

(a) $6n + n^2$ (b) $6(n + n)^3$ (c) $6 + n + n^3$ (d) $6(n + n^3)$

13. The length of a rectangle is 5 less than twice its width. What can be used to represent its perimeter?

Your answer: _____ .

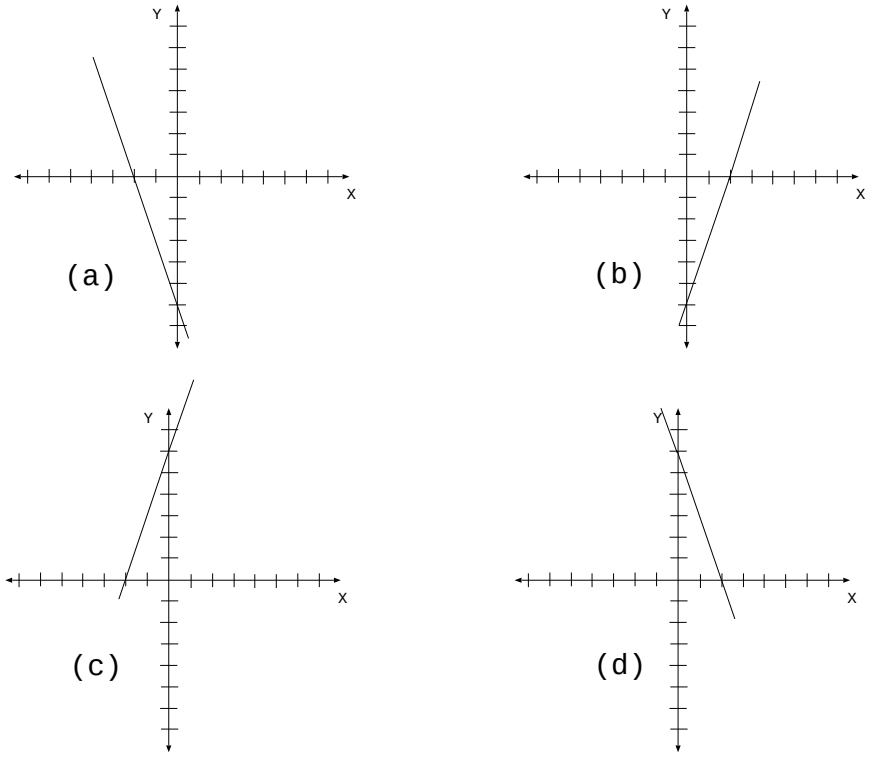
14. An RCA employee earned \$280 a week. If \$52 is deducted for taxes, \$35 for health benefits and \$25 for pension, what percent of the salary is left?

(a) 168% (b) 112% (c) 60% (d) 40%

15. If \$1300 is invested at $t\%$ and \$600 is invested at $(t-3)\%$ what can be used to represent the interest drawn in one year?

Your answer: _____ .

16. Which of the following is the graph of $-3x + y = -6$?



17. Find the slope of the line and is **perpendicular** to the line passing through $(-2, 5)$ and $(3, -3)$.

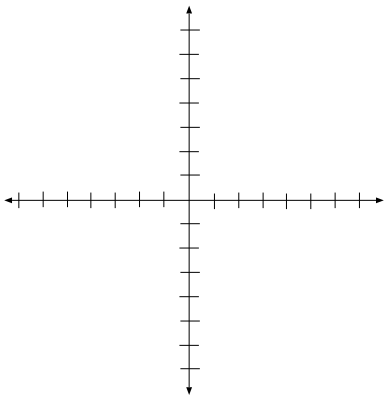
Slope: _____ .

18. Find the equation of the line passing through $(2, -3)$ with slope of $3/2$.

Equation: _____ .

19. Solve the following system of equations.

$$\begin{aligned} 2x - y &= 1 \\ -3x + 2y &= 5 \end{aligned}$$

Your answer: _____ .

20. Graph $3x + 2y < 6$.