Math 042: Exam I **Date: Feb 24, 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 $a = 5$, $b = -3$

(a) 106 (b) -106 (c) 56 (d) -56

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

Your answer: ________________________________ .

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

Your answer: ________________________________ .

8. Solve for c: $f = \frac{9}{5}c + 32$

(a) $\frac{5f-32}{9}$ (b) $\frac{5(f-32)}{9}$ (c) $\frac{5f}{9} - 32$ (d) $\frac{9}{5}f - 32$

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

Your answer: ______________________________ .

10. 120% of what number is 30?

Your answer: ______________________________ .

11. 24 is what percent of 80?

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: ______________________________ .