MAT 1033 – INTERMEDIATE ALGEBRA PRETEST

1. Solve the equation for x: $3x - 4 = x + 6$

2. Simplify this expression: $2(x + 3) - 5(2x - 7)$

3. Evaluate the following expression given that x = 3 and y = -2:

$$x^3 - y^2$$

4. Multiply: $(2x - 7)(x + 3)$

5. Simplify: $(3x^2y)(4x^3y^2)$

6. Solve the inequality: $5x - 3 < 3x + 1$

7. Translate the following into an algebraic expression: Four less than three times a number.

8. Simplify: $\dfrac{5x^3y}{30x^2y^6}$

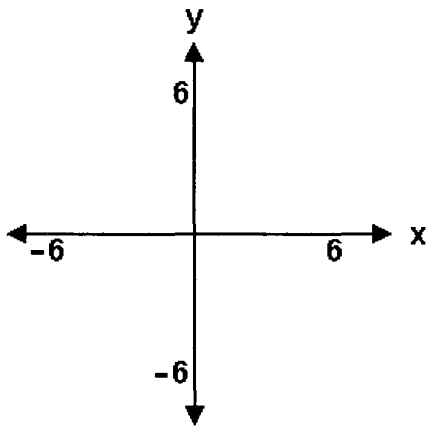
9. Simplify: $-5 + 3 + 7 - 4$

10. Solve the following inequality: $-5x < 3x + 8$

11. Factor completely: $x^2 - 25$

12. Factor completely: $x^2 - 12x + 20$

13. Graph the linear equation: $x - 2y = 4$



14. Simplify: $\sqrt[3]{27}$

15. Simplify: $\sqrt{18}$

16. Simplify this expression: $(5x^3 + 3x^2 - 8) - (3x^3 + 4x - 2)$

17. Solve for the variable: $\frac{x}{25} = \frac{6}{15}$

18. Evaluate the expression: $6 + |4 - 8| - 5^2$

19. Simplify: $\frac{12y^{-5}}{14y^2}$

20. Evaluate $x - y - z$ for $x = \frac{1}{2}$, $y = \frac{2}{3}$, and $z = -\frac{3}{4}$.