Math A2: Homework Week of Nov 5-9

Monday, November 5

1. Complete the following algebraic fraction operations and express the answer in simplest form.

   a) $\frac{2y-6}{y^4} \div \frac{3y-9}{3y^2}$ b) $\frac{12a^4}{a-3} \div \frac{2a}{3a-9}$ c) $\frac{x^2-2x-24}{x^2+4x} \div \frac{x^2-36}{x+6}$

   d) $\frac{x^2-4}{10} \cdot \frac{2}{2x^2+x-10}$ e) $\frac{x^2+1}{3x^2} \cdot \frac{3x+3}{x^2+2x+1}$

2. Factor completely: $2x^3+10x^2+8x$
3. Solve the following system of equations: $x + 2y = 6$
   $4x - 4y = 24$
4. For what value of x is the following fraction undefined? $\frac{3x^2-10}{12-4x}$
5. If the area of a rectangular box is $\frac{a^2-7a-8}{2a+2}$, and the width is $\frac{8-a}{-2}$, what is the length?
6. The equation $*(\Delta + \heartsuit) = *\Delta + *\heartsuit$ is an example of the:
   (A) Associative Law (B) Commutative Law
   (C) Distributive Law (D) Transitive Law

Tuesday, November 6 – No School

Wednesday November 7 – Study for Test Tomorrow! ☺

Thursday, November 8 – Test Today ☺ →
Simplifying/Multiplying/Dividing Algebraic Fractions
Old Material

Friday, November 9

1. Perform the indicated Operation and Simplify:

   a. $\frac{3}{x}+\frac{5}{x}$ b. $\frac{3x+2}{x-1} - \frac{x+3}{x-1}$ c. $\frac{x+2}{x^2-5x-6} + \frac{3x+2}{x^2-5x-6}$

2. Factor Completely:
   a. $25 - x^2$ b. $x^2 - 6x - 16$ c. $9x^2 - 36$ d. $2x^2 - 4x - 30$

3. Perform the indicated operation and simplify:

   a. $\frac{5x-20}{5x^2-80}$ b. $\frac{x^2-3x+2}{2x-4} \cdot \frac{4x}{x^2-1}$ c. $\frac{x+2}{x^2-5x-6} \cdot \frac{x^2-4x}{2x+4}$

4. Subtract $2x^2 - 4x + 3$ from $5x^2 + x - 7$