Math 05 Fall 2005, Quiz 6
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1. Simplify $\left(\frac{48x^8y^6}{12x^4y^2}\right)^2$ using the properties of exponents.

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

3. Find the perimeter of a rectangle that has sides $3x + 4$ and $8x - 2$.

4. Find the area of the rectangle in Question 3.

5. Perform the following operations

   (a) $(4a - 6b)(3a + 4b)$.

   (b) $(3x - 4)^2$.

   (c) $(4p - 3q)(4p + 3q)$.

6. Divide $4x^3 - 2x^2 + 2x + 15$ by $2x + 3$.

7. Find the remainder of the division $\dfrac{x^8 + 7x^7 - 8x^6 + 3x^5 - 2x^4 + 3x^3 - x^2 + 4x - 2}{x - 1}$.