

## 5-2 Practice

### *Dividing Polynomials*

Simplify.

$$1. \frac{6k^2m - 12k^3m^2 + 9m^3}{2km^2}$$

$$2. (-30x^3y + 12x^2y^2 - 18x^2y) \div (-6x^2y)$$

Use Long Division to simplify the quotient

$$3. \frac{f^2 + 7f + 10}{f + 2}$$

$$4. \frac{4x^2 - 2x + 6}{2x - 3}$$

$$5. (a^3 - 64) \div (a - 4)$$

$$6. \frac{2h^4 - h^3 + h^2 + h - 3}{h^2 - 1}$$

**HW 5.2 Part 2**

Use Synthetic Division to simplify the following

7. 
$$\frac{2x^3 + 6x + 152}{x + 4}$$

8. 
$$(3w^3 + 7w^2 - 4w + 3) \div (w + 3)$$

9. 
$$(6y^4 + 15y^3 - 28y^2 - 6) \div (y + 2)$$

10. 
$$(x^4 - 3x^3 - 11x^2 + 3x + 10) \div (x - 5)$$

11. 
$$\frac{6x^2 - x - 7}{3x + 1}$$

**25. GEOMETRY** The area of a rectangle is  $2x^2 - 11x + 15$  square feet. The length of the rectangle is  $2x - 5$  feet. What is the width of the rectangle? Use the method of your choice and check your answer!!!