

Name: \_\_\_\_\_  
PC: Long and Synthetic Division Practice

Date: \_\_\_\_\_  
Ms. Loughran

For 1-7, use synthetic division to divide the polynomials.

$$1. \frac{x^3 - 5x^2 + 4x - 2}{x+2}$$

$$2. \frac{x^3 - 5x^2 + 4x - 2}{x-2}$$

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

$$4. \frac{4a^2 + 4a - 12}{2a-1}$$

$$5. \frac{6a^2 - 5a + 10}{3a+2}$$

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

$$7. \frac{2x^3 - x^2 - 5}{2x-5}$$

For 8-10, use long division to divide the polynomials.

$$8. \frac{2x^4 - x^3 - 2x + 5}{x^2 + 2x + 1}$$

$$9. \frac{2x^4 - 3x^2 + 7x - 8}{x^2 + x - 3}$$

$$10. \frac{x^3 + 4ax^2 + 4a^2x + a^3}{2a+x}$$