Unit 3

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period \_\_\_\_\_\_\_\_

Day 4

**Assignment: Long Division of Polynomials**

**Divide using long division. Show Work!**

1. $\left(2x^{2}+10x+8\right)÷\left(2x+2\right)$ 2. $\left(6x^{2}-7x-5\right)÷\left(3x-5\right)$

3. $\left(20x^{2}-13x+2\right)÷\left(4x-1\right)$ 4. $\left(x^{2}-2x+3\right)÷\left(x+5\right)$

5. $\left(x^{3}+2x^{2}-x-2\right)÷\left(x+2\right)$ 6. $(x^{4}-3x^{3}-7x^{2}+2x-14)÷(x-4)$

7. What is the remainder when $2x^{2}+6x+3$ is divided by $x+3$?

Show Work!

 A. 39 B. 3 C. 1 D. 0

**Review:** Simplify.

8. $(3x^{3}+5y^{3})(3x^{3}-5y^{3})$ 9. $\left(2x-3\right)\left(x^{5}-4x^{3}+7\right)$