Name: _____ **Precalculus Unit 1, Lesson 3**

Aim: How do we divide polynomials?

I. Do Now: Factor completely.

1. Factor completely:
   $3x^3 - 7x^2 - 12x + 28$

2. Factor completely:
   $14x(2x-1) + (2x-1)^2$

3. Solve for x:
   $3x^3 - 7x^2 - 12x + 28 = 0$

II. Motivation: Without using a calculator, find $\frac{1028}{13}$ as a mixed number.

III. Development: Division of Polynomials

4. Divide $(x^3 + 4x^2 + x - 6)$ by $(x-1)$.

5. $x+2 \overline{)\, x^2 + 6x + 9}$

IV. You try:

6. $(6x^3 - 19x^2 + 16x - 4) \div (x-2)$

7. $\dfrac{x^3 - 8}{x - 2}$

8. $x+5 \overline{)\, x^2 + 8x + 13}$

HW3
MPS21 HW Sheet #2: 1, 4, 7, 10*
MPS21 HW Sheet #1: 26, 27*, 39, 40, 44*, 75