Algebra 2 Bellwork Monday, December 15, 2014

Find each quotient. Give any remainder in any form you wish.

1.
$$\frac{3x^3 - 5x^2 - 29x + 17}{x - 4}$$

$$2. \quad \frac{6x^4 - 27x^3 + 22x^2 - 45x + 20}{3x^2 + 5}$$

3. Is
$$x + 6$$
 a factor of $5x^4 + 21x^3 - 53x^2 - 5x - 66$?

- 4. What is the remainder of this quotient? $\frac{4x^3 + 2x^2 11x + 15}{x 1}$
- 5. Given 2x 3 is a factor of $2x^3 7x^2 42x + 72$ use polynomial division to help find the other two factors.

Bellwork Monday, December 15, 2014 Algebra 2

Find each quotient. Give any remainder in any form you wish.

1.
$$\frac{3x^{3} - 5x^{2} - 29x + 17}{x - 4}$$

$$\cancel{X - 4}$$

$$\cancel{3x^{3} - 5x^{2} - 29x + 17}$$

$$- \cancel{3x^{3} - 5x^{2} - 29x}$$

$$- \cancel{7x^{2} - 29x}$$

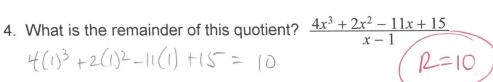
$$- \cancel{7x^{2}$$

$$2. \quad \frac{6x^4 - 27x^3 + 22x^2 - 45x + 20}{3x^2 + 5}$$

2. $\frac{6x^{4} - 27x^{3} + 22x^{2} - 45x + 20}{3x^{2} + 5}$ $3x^{2} + 5$ $6x^{4} - 27x^{3} + 22x^{2} - 45x + 20$ $6x^{4} - 27x^{3} + 22x^{2} - 45x + 20$ $6x^{4} + 10x^{2} - 27x^{3} + 12x^{2} - 45x$

3. Is
$$x + 6$$
 a factor of $5x^3 + 21x^3 - 53x^2 - 5x - 66$?
 $5(-6)^4 + 21(-6)^3 - 53(-6)^2 - 5(-6) - 66 = 0$

$$4(1)^3 + 2(1)^2 - 11(1) + 15 = 10$$



5. Given 2x - 3 is a factor of $2x^3 - 7x^2 - 42x + 72$ use polynomial division to help find the other two

$$x^{2}-2x-24 = (x-6)(x+4)$$

