Algebra 2 Bellwork Friday, December 12, 2014

Find each quotient. State remainders any way you wish.

1. $\dfrac{4x^3 - 9x^2 + 7x - 10}{x - 2} =$

2. $\dfrac{6x^3 + 23x^2 + 2x - 20}{3x + 4} =$

3. $\dfrac{6x^4 - 16x^3 - 13x^2 + 40x - 9}{2x^2 - 5} =$

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Find each quotient. State remainders any way you wish.

1. $\dfrac{4x^3 - 9x^2 + 7x - 10}{x - 2} =$

$4x^2 - x + 5 \quad r = 0$

$x-2 \;\big|\; 4x^3 - 9x^2 + 7x - 10$

$-\,(4x^3 - 8x^2)$

$-x^2 + 7x$

$-\,(-x^2 + 2x)$

$5x - 10$

$-\,(5x - 10)$

0

2. $\dfrac{6x^3 + 23x^2 + 2x - 20}{3x + 4} =$

$2x^2 + 5x - 6 \quad r = 4$

$3x+4 \;\big|\; 6x^3 + 23x^2 + 2x - 20$

$-\,(6x^3 + 8x^2)$

$15x^2 + 2x$

$-\,(15x^2 + 20x)$

$-18x - 20$

$-\,(-18x - 24)$

4

3. $\dfrac{6x^4 - 16x^3 - 13x^2 + 40x - 9}{2x^2 - 5} =$

$3x^2 - 8x + 1 \quad r = -4$

$2x^2 - 5 \;\big|\; 6x^4 - 16x^3 - 13x^2 + 40x - 9$

$-\,(6x^4 \;\; 0x^3 - 15x^2)$

$-16x^3 + 2x^2 + 40x$

$-\,(-16x^3 \;\; 0x^2 + 40x)$

$2x^2 \;\; 0x - 9$

$-\,(2x^2 \;\; -5)$