

March 28, 2012

Alg2

Get out yesterday's WS



6)

$$\begin{array}{r}
 x^2 + 6x - 10 - \frac{2}{x-2} \\
 x-2) \overline{x^3 + 4x^2 - 22x + 18} \\
 - \cancel{x^3 + 2x^2} \\
 \hline
 - 6x^2 - 22x \\
 - \cancel{6x^2 + 12x} \\
 \hline
 - 10x + 18
 \end{array}$$

$$\begin{array}{r}
 2 \Big| 1 \ 4 \ -22 \ 18 \quad -10x + 18 \\
 \underline{-} \ 2 \ 12 \ -20 \quad \underline{-10x - 20} \\
 \hline
 1 \ 6 \ -10 \ -2
 \end{array}$$

3/28 - Synthetic Division

$$(6a^3 - 16a^2 + 6a + 10) \div (a - 1) \quad \text{What makes } \underline{\underline{= 0}} \text{?}$$

A synthetic division diagram. On the left, there is a vertical column of numbers: 6, -16, 6, 10. To the right of this column is a horizontal line with a bracket underneath it. Below the first number 6 is a blue downward arrow. To the right of the horizontal line, there is another column of numbers: 6, -10, -4, 6. Above the first number 6 in this column is a blue downward arrow. A red bracket is placed over the entire row of numbers below the horizontal line, spanning from the first number 6 to the last number 6.

6	-16	6	10
↓	6	-10	-4
6	-10	-4	6

$$6a^2 - 10a - 4 + \frac{6}{a-1}$$

$$(9v^3 + 32v^2 + 23v + 15) \div (v + 3)$$

$$\begin{array}{r} -3 | 9 \ 32 \ 23 \ 15 \\ \underline{-27} \ \underline{-15} \ \underline{-24} \\ \hline 9 \ 5 \ 8 \ -9 \end{array}$$

$$9v^2 + 5v + 8 - \frac{9}{v+3}$$

$$(x^3 - 13x - 26) \div (x + 2)$$

$$\begin{array}{r} \boxed{-2} \mid 1 \quad 0 \quad -13 \quad -26 \\ \quad \quad -2 \quad 4 \quad 18 \\ \hline \quad 1 \quad -2 \quad -9 \quad -8 \end{array}$$
$$x^2 - 2x - 9 - \frac{8}{x+2}$$

$$(m^3 - 35m + 4) \div (m - 6)$$

$$(18b^3 + 12b^2 - 4b + 1) \div (3b + 1)$$

$$\begin{array}{r} 18 & 12 & -4 & 1 \\ -\frac{1}{3} | & & & \\ & -6 & -2 & 2 \\ \hline & \frac{18}{3} & \frac{6}{3} & \frac{-6}{3} & 3 \\ & 6b^2 & 2b & -2 & + \frac{3}{3b+1} \end{array}$$

because
of the
3 here

$$(5x^3 + 38x^2 + 24x - 19) \div (5x - 2)$$

$$\begin{array}{r} \boxed{5} \\[-1ex] 5 \quad 38 \quad 24 \quad -19 \\[-1ex] \underline{-} \quad 2 \quad 16 \quad 16 \\[-1ex] \hline 5 \quad \frac{40}{5} \quad \frac{40}{5} \quad -3 \end{array}$$

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

Homework

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Due