

Bellwork Alg 2 Tuesday, November 26, 2019

Find each quotient using polynomial long division.

1. $\frac{x^3 + 13x^2 + 34x - 48}{x + 8}$

2. $\frac{x^4 + 4x^3 - x^2 + 3x + 24}{x + 4}$

Find each quotient using polynomial long division.

ANSWERS

1. $\frac{x^3 + 13x^2 + 34x - 48}{x + 8}$

$$\begin{array}{r}
 x^2 + 5x - 6 \\
 x+8 \overline{) x^3 + 13x^2 + 34x - 48} \\
 \underline{-(x^3 + 8x^2)} \\
 5x^2 + 34x \\
 \underline{-(5x^2 + 40x)} \\
 -6x - 48 \\
 \underline{-(-6x - 48)} \\
 0
 \end{array}$$

$x^2 + 5x - 6$

2. $\frac{x^4 + 4x^3 - x^2 + 3x + 24}{x + 4}$

$$\begin{array}{r}
 x^3 - x + 7 \\
 x+4 \overline{) x^4 + 4x^3 - x^2 + 3x + 24} \\
 \underline{-(x^4 + 4x^3)} \\
 0 - x^2 + 3x \\
 \underline{-(-x^2 - 4x)} \\
 7x + 24 \\
 \underline{-(7x + 28)} \\
 -4
 \end{array}$$

$x^3 - x + 7 \quad R = -4$