Dividing Polynomials (Synthetic Division)

Name _____

Date _____ Period _____

Given $p(x)$ and $q(x)$ are polynomial functions, with degree of $q(x)$ > degree of $p(x)$ then,

$$\frac{p(x)}{q(x)} = f(x) + \frac{r(x)}{q(x)}$$

Given $p(x)$ and $q(x)$ are polynomial functions, with degree of $q(x)$ > degree of $p(x)$ then,

$$p(x) = f(x) \cdot q(x) + r(x)$$

$$\frac{6x^3 - 14x^2 + 10x - 4}{x - 1}$$

$$\frac{3x^3 + x^2 - 5}{x + 4}$$