Dividing Polynomials (Long Division)

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,

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

Long Division

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

Long Division

$$\frac{3x^3 + 2x - 11}{x - 3}$$