Polynomial Long Division

$$is b a factor of a?$$

$$a÷b$$

$$\frac{a}{b}$$

Let’s look at a simple long division problem we have seen in prior grades

Example 1: $ 96÷8$

Example 2: Is 3 a factor if 1492?

Example 3: Is $x$ a factor of $2x^{2}$?

Example 4: $(x^{2}+3x-12)÷(x-3)$

Example 5: $(x^{3}+2x+1)\left(x+1\right)^{-1}$

Example 6: $\frac{2x^{3}+7x^{2}+2x+9}{2x+3}$