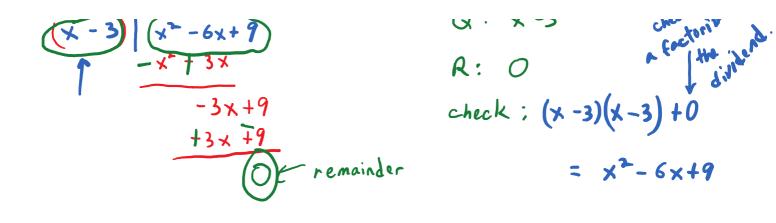
## **Division of Polynomials**

Goal: To long divide polynomials





b) 
$$(x^{2} + 5x - 9) \div (x - 2)$$
  
 $(x - 2) \xrightarrow{(x + 1)} (x + 7) + 5 = x^{2} + 5x - 9$   
 $-x + 2x$   
 $7/x - 9$   
 $-1x + 14$   
 $7 = \frac{5}{x^{2} + 5x - 9} = x + 5x - 9$ 

c) 
$$(2x^{n} - x - l) \stackrel{!}{=} (2x - l)$$
  
 $(2x)^{l} \sqrt{2x^{n} - x - l}$   
 $\frac{-2x^{2} + x}{0 - l}$   
 $\frac{0}{-1}$   
 $\frac{0}{$ 

Section 6.6 Division of Polynomials Page 2

d) 
$$(3x^{4} + 2x^{3} - 1/x^{3} - 2x + 5) + (x^{3} - 2)$$
  
 $(3x^{2} + 2x - 5 + \frac{2x - 5}{x^{2} - 2})$   
 $x^{2} + 0x - 2$   
 $3x^{4} + 2x^{3} - 1/x^{2} - 2x + 5$   
 $-3x^{4} + 0x^{3} + 6x^{2}$   
 $2x^{3} - 5x^{2} - 2x$   
 $-2x^{3} + 70x^{2} + 4x$   
 $-5x^{2} + 5x^{2} + 70x^{2} + 10$   
 $2x - 5$ 

You Try 14!

 $(18 \times (-27 \times (-3 \times )) \div 9 \times )$ 

18x6-27x5-3x

9x3 182 3 X 9 7 39×28 - 3×