11.7 Dividing Polynomials

Assignment:

To divide a polynomial by a monomial: Rewrite the Monomial as denominator then simplify each term

Polynomial long division:

Examples

1. Divide $9x^2+12x-18$ by $3x$.

$$\frac{9x^2}{3x}+\frac{12x}{3x}-\frac{18}{3x}$$

$$3x+4-\frac{6}{x}$$

2. Divide $4p^2-10p$ by $-2p$

$$\frac{-4p^2}{-2p}+\frac{10p}{-2p}$$

$$-2p+5$$

3. Use long division to divide 453 by 18.

$$18\overline{)453}\quad 25\tfrac{3}{18}$$

$$-36$$

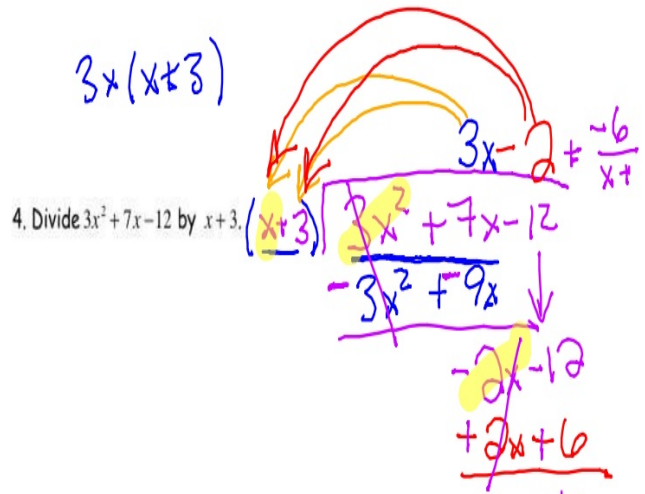
$$93$$

$$-90$$

$$3$$

$$25\tfrac{1}{6}$$

4. Divide $3x^2+7x-12$ by $x+3$.



5. Divide x^3+3x+5 by $x+2$