

Factoring

# Factoring “UN-Does” FOIL

FOIL



$$(2x - 3)(x - 4)$$

$$2x^2 - 11x + 12$$



**FACTOR**

# FACTOR

$$\underline{3x^2} - 11x - \underline{\underline{4}}$$

$$(3x + 1)(x - 4)$$

$$\begin{array}{r} -12x \\ +1x \\ \hline -11x \end{array}$$

# FACTOR

a.  $5x^2 - 33x + 18$

$$(5x - 3)(x - 6)$$

$$\begin{array}{r} -30x \\ -3x \\ \hline -33x \end{array}$$

b.  $2x^2 - 3x - 9$

$$(2x + 3)(x - 3)$$

$$\begin{array}{r} -6x \\ +3x \\ \hline -3x \end{array}$$

c.  $9x^2 - 18x - 40$

$$(3x + 4)(3x - 10)$$

$$\begin{array}{r} -30x \\ +12x \\ \hline -18x \end{array}$$

**ALWAYS ASK YOURSELF: "IS THERE A COMMON FACTOR?" BEFORE FACTORING.**

d.  $\frac{6x^2}{2} + \frac{14x}{2} + \frac{4}{2}$  GCF: 2

$$2(3x^2 + 7x + 2) = 2(3x + 1)(x + 2)$$

$$\begin{array}{r} + 6x \\ + 1x \\ \hline 7x \end{array}$$

e.  $\frac{12m^2}{3} + \frac{33m}{3} + \frac{18}{3}$  GCF: 3

$$3(4m^2 + 11m + 6) = 3(4m + 3)(m + 2)$$

$$\begin{array}{r} + 8m \\ + 3m \\ \hline 11m \end{array}$$