

Algebra 1 8.6

Factor trinomials

Solve quadratic equations by factoring
quadratic

EWE

Factor

Zero product property
activity: x-factor

whiteboards

$$x^2 + 12x + 36$$
$$(x+6)(x+6)$$

6	36
6	6

12

ICE ws

Example 3 c is Negative

Factor each polynomial.

a. $x^2 + 2x - 15$

$$\begin{array}{r} 1 \ 15 \\ 3 \ 5 \end{array}$$

$$(x-3)(x+5)$$

$$(x+5)(x-3)$$

~~$$(x+5)(x-5)$$~~

b. $x^2 - 7x - 18$

~~$\begin{array}{r} -18 \\ -9 \quad 2 \\ -7 \end{array}$~~

$(x-9)(x+2)$

GuidedPractice

3A. $y^2 + 13y - 48$

3B. $r^2 - 2r - 24$

$$x^2 + 10x + 24 = 0$$

$$(x+6)(x+4) = 0$$



$$x+6=0$$

$$-6 \quad -6$$

$$x = -6$$

$$x+4=0$$

$$-4 \quad -4$$

$$x = -4$$

~~$$\begin{array}{r} 24 \\ 6 \quad 4 \\ \hline 10 \end{array}$$~~

$$\text{~~~~~} = 0$$

$$(x+2)(2x-7) = 0$$

↓

$$\begin{array}{r} x+2=0 \\ -2 \quad -2 \\ \hline \end{array}$$

$$x = -2$$

↓

$$\begin{array}{r} 2x-7=0 \\ +7 \quad +7 \\ \hline \end{array}$$

$$\frac{2x}{2} = \frac{7}{2}$$

$$x = 3.5$$