Algebra 1 8.6
Factor trinomials
Solve quadratic equations by factoring
quadratic
EWE
Factor
Zero product property
activity: x-factor
whiteboards

Example 3 *c* is Negative

Factor each polynomial.

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

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

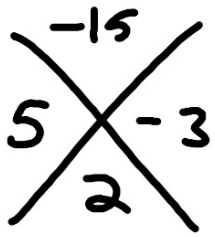
$x+5$

$x-3$

$-3x \quad -15$

x^2+5x

$x^2+2x-15$

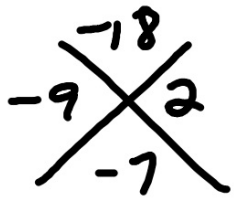


b. $x^2 - 7x - 18$

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

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

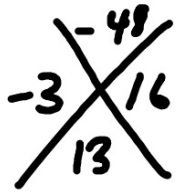
~~$(x-2)(x+9)$~~



GuidedPractice

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

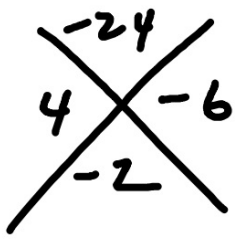
$(y-3)(y+16)$



1	48
2	24
3	16
4	12
6	8

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

$(r+4)(r-6)$



Zero product property: $(\quad)\cdot(\quad)=0$

20 / 5 × 4 / 9

$x^2+9x+20=0$

$(x+5)\cdot(x+4)=0$

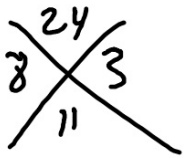
$x+5=0$ $\quad$ $x+4=0$

$-5\ -5$ $\quad$ $-4\ -4$

$x=-5$ $\quad$ $x=-4$

Solve

$$x^2 + 11x + 24 = 0$$



$$(x+8)(x+3) = 0$$

$x+8=0$ $\quad$ $x+3=0$

$-8\ -8$ $\quad$ $-3\ -3$

$x = -8$ $\quad$ $x = -3$

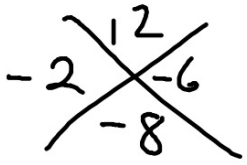
$x^2 - 8x + 12 = 0$

$(x-2)(x-6) = 0$

$x-2=0$ $\quad$ $x-6=0$

$+2\ +2$ $\quad$ $+6\ +6$

$x = 2 \quad x = 6$



$(\quad)(\quad)$

14. $x^2 - 11x + 28 = 0$

(Solve)