

Geometry warm-up

Name: Key

Find solutions by solving.

← solve by factoring

← solving by square root method

1) $x^2 + 10x - 24 = 0$

24 -2 12 = -24
 1 24 -2 12 = 10
 2 12 -2 12 = 10

3 4 $(x-2)(x+12) = 0$
 $x-2=0$ $x+12=0$
 $x=2$ $x=-12$

2) $x^2 + 7x + 10 = 0$

$2 \cdot 5 = 10$
 $2 + 5 = 7$

$(x+2)(x+5) = 0$
 $x+2=0$ $x+5=0$
 $x=-2, -5$

3) $x^2 - 48 = 0$

$\sqrt{x^2} = \sqrt{48}$

$x = \sqrt{16 \cdot 3}$
 $x = 4\sqrt{3}$

Simplify by expanding and distributing.

4) $(x-6)^2$

$(x-6)(x-6)$

$x^2 - 6x - 6x + 36$

$x^2 - 12x + 36$

5) $(x+9)^2$

$(x+9)(x+9)$

$x^2 + 9x + 9x + 81$

$x^2 + 18x + 81$