Algebra 1 8.6

Factor trinomials

X = answer Solve quadratic equations by factoring

quadratic

EWE

Factor ( )·( ) = 0

Zero product property

Factor each polynomial.

1A. $d^2 + 11d + 24$

1 24
~~2 12~~
3 8
4 6

$(d+3)(d+8)$

Factor vs solve

b. $x^2 - 7x - 18$ =0

-18
-9 2
-7

1 18
2 9
3 6

$(x-9)(x+2) = 0$

$x-9=0$ $\quad x+2=0$
$+9\ +9$ $\quad -2\ -2$

$x=9$ $\quad x=-2$

$j^2-9jk-10k^2$

$(j+1k)(j-10k)$

-10
1 -10
-9

1 10
2 5

$=$
0

GuidedPractice

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

=
0

3B. $r^2 - 2r - 24$ =0

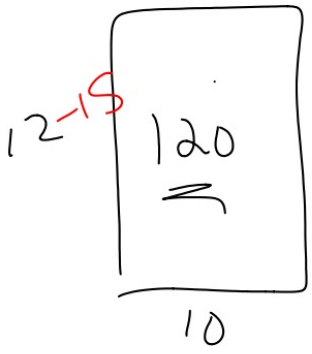
=
0

$x^2 + 5x + 6 = 0$

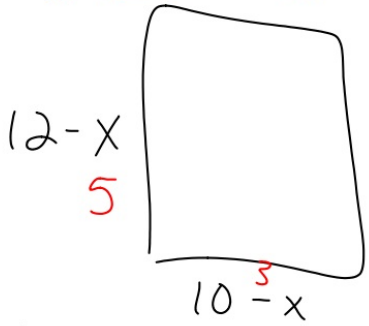
$x^2 + 17x + 60 = 0$

$x^2 - 24x + 140 = 0$

33.



5 x 3 inches



15

$$(12-x)(10-x)=15$$

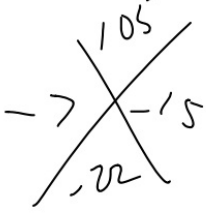
$$12-x$$
$$10-x$$
$$-12x+x^2$$
$$120-10x$$

$$120-22x+x^2=15$$
$$-15 \qquad -15$$

$$x^2-22x+105=0$$

$$(x-7)(x-15)=0$$

$$x-7=0 \qquad x-15=0$$
$$x=7 \qquad x=15$$



1 105
5 21
3 35
7 15