

## Bell Ringer

Wednesday 9/25

Give three values of b that make the polynomial factorable.

1.  $x^2 + bx - 40$

$$\begin{array}{r}
 -40 \\
 \swarrow \quad \searrow \\
 -1 \quad 40 \\
 \hline
 \boxed{\begin{array}{r} -2 + 20 \\ -4 + 10 \\ -5 + 8 \end{array}} = \begin{array}{l} 18 \\ 6 \\ 3 \end{array}
 \end{array}$$

2.  $x^2 + bx + 42$

$$\begin{array}{r}
 42 \\
 \swarrow \quad \searrow \\
 1 \quad 42 \\
 \hline
 1 + 42 = 43 \\
 6 + 7 = 13 \\
 2 + 21 = 23 \\
 3 + 14 = 17
 \end{array}$$

2.5 - Day 2 online hw due today

2.6 Day 1 online hw due tomorrow

## Essential Question:

How can I factor a trinomial of the form  
 $ax^2 + bx + c$  when a isn't 1?

The area of the sign is  $2x^2 - 13x - 7$ .

What expressions represent the dimensions of the sign?



$$(2x+1)$$

$$\begin{array}{l}
 \begin{array}{c} -14 \\ \wedge \\ 7 \end{array} \\
 \begin{array}{c} 7 \\ \wedge \\ -14 \end{array}
 \end{array}
 \begin{array}{l}
 \sqrt{2x^2 + x - 14x - 7} \\
 x(2x+1) - 7(2x+1) \\
 (2x+1)(x-7)
 \end{array}$$

What are the dimensions if  $x = 10$ ?

$$\begin{array}{l}
 2x+1 \\
 2(10)+1=21
 \end{array}$$

$$\begin{array}{l}
 x-7 \\
 10-7=3
 \end{array}$$

# WHITEBOARD PRACTICE!

Get out blue sheets with factoring  
instructions :)

Factor the trinomial

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

$$4x^2 - 2x + 6x - 3$$

$$\begin{array}{r} -12 \\ \swarrow \searrow \\ -1 \quad 12 \\ \hline -2 \quad 6 \\ \hline -3 \quad 4 \end{array}$$

$$\begin{aligned} & 2x(2x-1) + 3(2x-1) \\ & (2x-1)(2x+3) \end{aligned}$$

Factor the trinomial

$$8y^2 + 8y - 48$$

$$8(y^2 + y - 6)$$

$$\begin{array}{r} -6 \\ -2 \quad 3 \end{array}$$

$$8(y-2)(y+3)$$

Solve for x

$$2x^2 - 5x - 18 = 0$$

$$\underbrace{2x^2 + 4x}_{2x(x+2)} - \underbrace{9x - 18}_{-9(x+2)} = 0$$

$$\begin{array}{r} -36 \\ \wedge \\ 4 \quad -9 \end{array}$$

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

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

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

$$x = -2$$

$$\begin{array}{r} 2x-9=0 \\ +9 \quad +9 \end{array}$$

$$\frac{2x}{2} = \frac{9}{2}$$

$$x = \frac{9}{2}$$



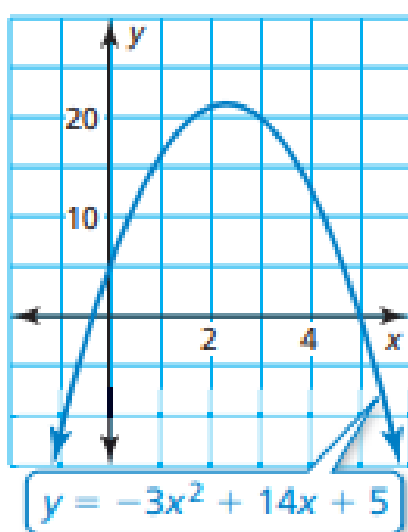
Solve for y

$$14y^2 - 2 = -3y$$

Factor the trinomial

$$-3x^2 + 11x - 6$$

Find the x-coordinates of the points where graph crosses the x-axis



Solve for y

$$6y^2 - 24y + 18$$

due Friday

2.6 Day 2 hw pg 99-100 #s 5, 6, 9,  
13, 17, 21, 24, 27, 31, 35, 40, 53, 33

