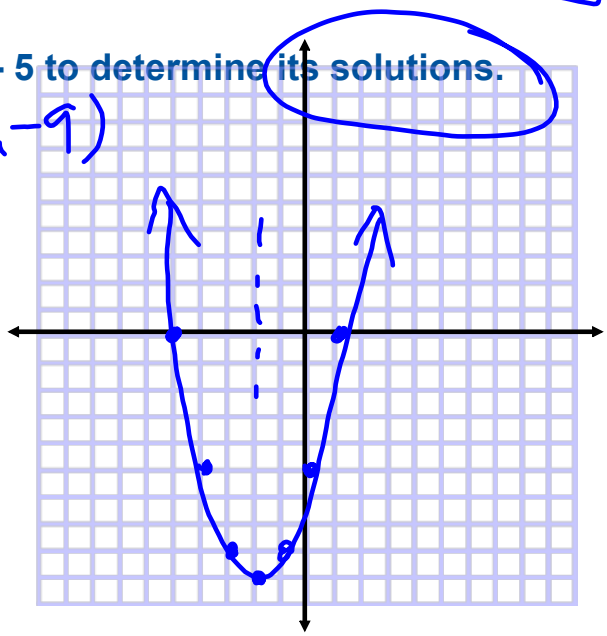
Stick Quiz

$\boxed{x=-5 \quad x=1}$

Graph the function $y = x^2 + 4x - 5$ to determine its solutions.

$x = \frac{-4}{2} = -2$ $(-2, -9)$

-5	
-4	
-3	
-2	-9
-1	
0	



Questions

On

Homework

LESSON 4-3 Solving Quadratic Equations by Factoring

I can... find zeros/roots/solutions of a quadratic by factoring.

Day 1 a = 1

For each problem below, ind 2 factors of the irst number, which will add to the second number.

1. 8 6

1·8
2·4

2. 10 -7

-2, -5

3. -5 4

5, -1

4. 12 7

5. -12 4

6. -12 1

Standard Form of a Quadratic

$$ax^2 + bx + c = 0$$

we need factors that:

Mulitply to ac

Add to b

$$(x+3)(x+4)$$

$$x(x+4)+3(x+4)$$

$$x^2+4x+3x+12$$

$$x^2+7x+12$$

1. $1x^2 + 7x + 12$

WATCH Only

$7x = 3x + 4x$

$(x^2 + 3x) + (4x + 12)$

$x(x+3) + 4(x+3)$

$(x+3)(x+4)$

a·c ~~Last~~ 12	middle 7
1·12	
2·6	
3·4	3+4=7

2. $1x^2 + \underbrace{3x}_{2x+1x} + 2$

$(x^2 + 2x) + (1x + 2)$

$x(x+2) + 1(x+2)$

$(x+2)(x+1)$

Last 2	middle 3
2·1	2+1=3

You Try!!

$-12x = -3x + -9x$

Factor the following.

3. $x^2 \underbrace{- 12x}_{} + 27$

$(x^2 - 3x) + (-9x + 27)$

$+(-9x$

4. $x^2 - 10x + 16$

Negative??

5. $x^2 + 3x - 18$

WATCH Only

-18	3

6. $x^2 - x - 20$

-20	-1

You Try!!

7. $x^2 + 4x - 5$

8. $x^2 - 5x - 24$

Now Solve:

Always Set equal to 0 BEFORE you Factor

-15	2
3·5	

$$1x^2 + 2x = 15$$

$$-15 \quad -15$$

$$x^2 + 2x - 15 = 0$$

$$(x-3)(x+5) = 0$$

$$x - 3 = 0 \qquad x + 5 = 0$$

$$+3 \quad +3 \qquad -5 \quad -5$$

$$x = 3 \qquad x = -5$$

You Try!!

10. $n^2 + 4n = 32$

11. $h^2 - 17h = -60$