

Warm Up

Put your name and Hour on the back side of the half sheet of paper (on the table)

Homework QuizFactor

$$6x^2 - 11x - 10$$

Homework Questions?

$$5) \quad \frac{4x^2}{2} + \frac{2x}{2} - \frac{20}{2}$$

$$2(2x^2 + 1x - 10)$$

$\begin{matrix} 1, 2 & & 1, 10 \\ & & 2, 5 \end{matrix}$

$$(1x + 2)(2x - 5)$$

$\begin{matrix} \text{---} & \text{---} & \text{---} \\ & 4x & -5x \end{matrix}$

$$12) \quad 4x^2 - 16x + 15$$

$$\begin{array}{cc} 1,4 & \underline{\underline{=}} & 1,5 \\ 2,2 & & 3,5 \end{array}$$

$$(2x - 3)(2x - 5)$$

-6x
-10x

$$8) \quad 12x^2 - 6x - 18$$

$$9) \quad 6x^2 - 13x + 6$$

$$\begin{array}{cc} 1,6 & 1,6 \\ 2,3 & 2,3 \end{array}$$

$$(2x - \quad)(3x - \quad)$$

Self Scoring Scale

4- I can *summarize* the concepts and explain it to others.

3- I can *apply* the concepts to answer questions correctly.

2- I can *apply* the concepts but with some *mistakes*.

1- I *need help* to know how to apply the concepts.

0- I *can't* apply the concepts even with help.

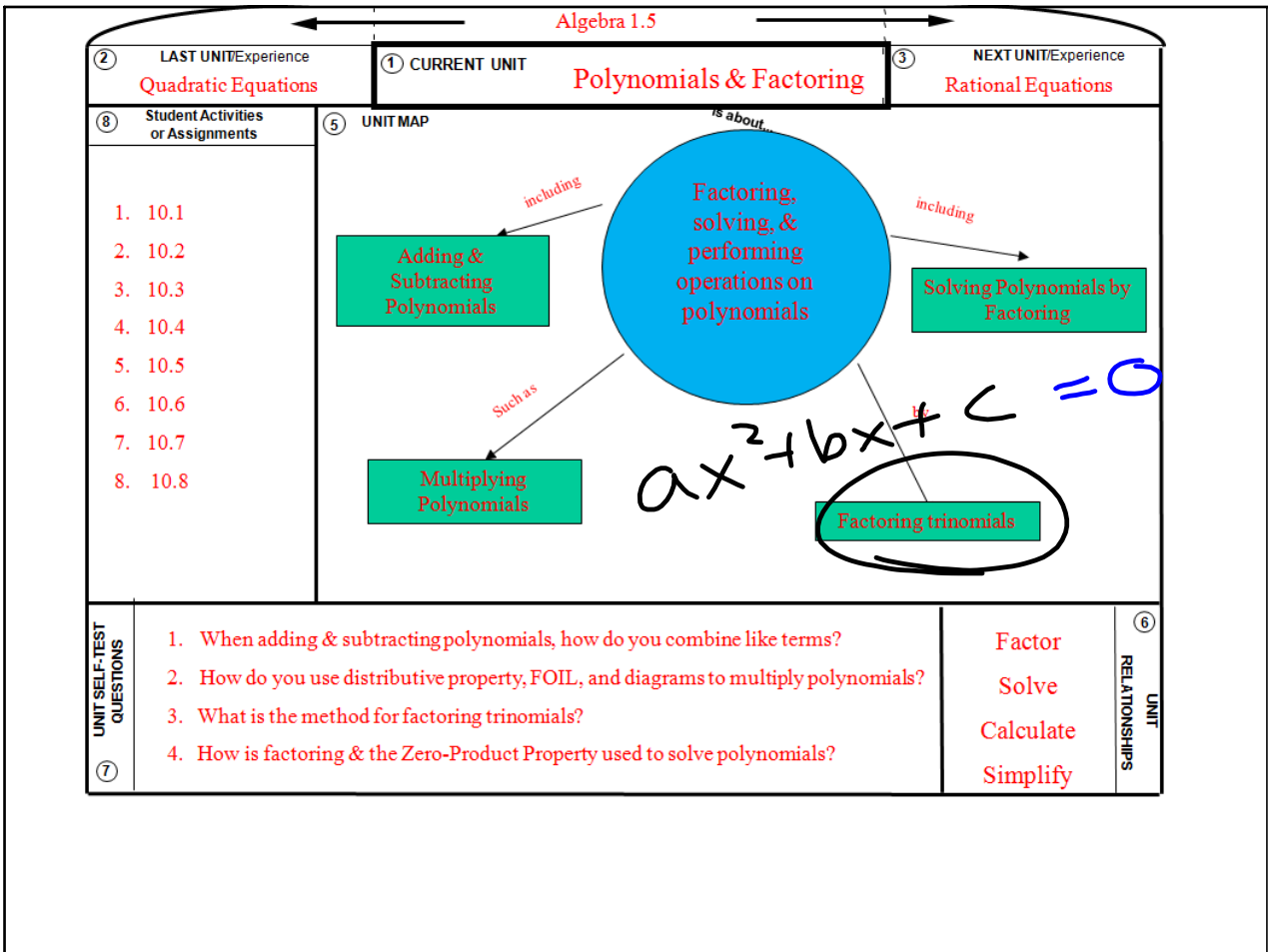
10.6 Factoring $ax^2 + bx + c$

Goals:

- Factor a quadratic expression of the form $ax^2 + bx + c$.
- Solve quadratic equations by factoring.

EQ:

What form should your answers be in after you factor?



Example 4: Solving a Quadratic Equation

Solve the equation

$$28n^2 + 20n + 3 = -34n - 15$$

$$\begin{array}{r} 28n^2 + 20n + 3 = -34n - 15 \\ + 34n + 15 \quad + 34n + 15 \\ \hline 28n^2 + 54n + 18 = 0 \\ \frac{28n^2}{2} + \frac{54n}{2} + \frac{18}{2} = 0 \end{array}$$

① = 0
② ÷ ?
③ () ()
④ x =

$$2(14n^2 + 27n + 9) = 0$$

1, 14
2, 7

1, 9
3, 3

$$2(2x + 3)(7x + 3) = 0$$

21x 6x

$$2(2x + 3)(7x + 3) = 0$$

~~2 = 0~~
 $2x + 3 = 0$
 $-3 \quad -3$
 $\frac{2x}{2} = \frac{-3}{2}$
 $x = \frac{-3}{2}$

$7x + 3 = 0$
 $-3 \quad -3$
 $\frac{7x}{7} = \frac{-3}{7}$
 $x = \frac{-3}{7}$

Try It Complete the following exercises.

$$3) \text{ Solve } 23x^2 - 20x + 17 = -10x^2 + 31x - 1$$

$$+10x^2 - 31x + 1 \quad +10x^2 \quad 31x \quad +1$$

$$\frac{33x^2 - 51x + 18}{3} = 0$$

$$3(11x^2 - 17x + 6) = 0$$

$\begin{matrix} 1 & 11 \\ 2 & 3 \end{matrix}$

$$(1x - 2)(11x - 3)$$

$\begin{matrix} -22x & -3x \end{matrix}$

$$(1x - 3)(11x - 2)$$

$-33x$

$$3(1x - 1)(11x - 6) = 0$$

$\begin{matrix} -11x & -6x \end{matrix}$

$$x - 1 = 0$$

$$x = 1$$

$$11x - 6 = 0$$

$$+6 \quad +6$$

$$\frac{11x}{11} = \frac{6}{11}$$

$$x = \frac{6}{11}$$

Homework 10.6 Day 3

"9.8" #29-38

x =

"9.7" #21-26, 28

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