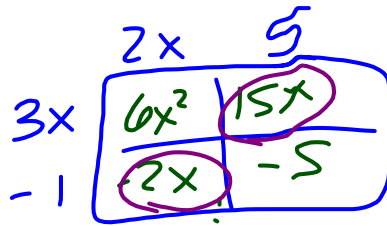


Warm Up

Week 7

$$(3x - 1)(2x + 5)$$



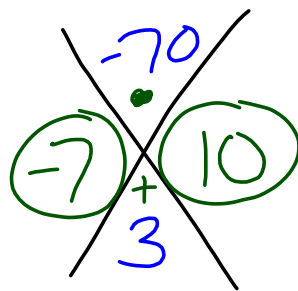
$$6x^2 + 13x - 5$$

Solve: $3x - 5 = 7x + 2$

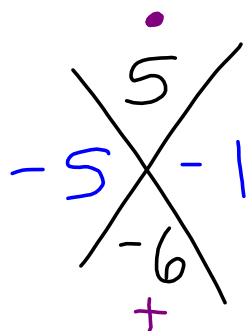
$$\begin{array}{r} 3x - 5 = 7x + 2 \\ +5 \qquad +5 \\ \hline 3x = 7x + 7 \\ -7x \quad -7x \\ \hline -4x = 7 \\ \frac{-4}{-4} \quad \frac{-4}{-4} \end{array}$$

$$x = -\frac{7}{4}$$

Homework Questions?



- 1, 70
- 2, 35
- 7, 10
- 5, 14



- 5, 1

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.

Quiz Was out of 35 points

A - 31.5

B - 28

C - 24.5

D - 21

10.4 Solving Quadratic Equations in Factored Form

Goals: • Solve quadratic equations in factored form

EQ: How do you find x-intercepts in factored form?

Algebra 1.5		←	→
② LAST UNIT/Experience Quadratic Equations	① CURRENT UNIT Polynomials & Factoring		③ NEXT UNIT/Experience Rational Equations
⑧ Student Activities or Assignments	⑤ UNIT MAP		
<ol style="list-style-type: none"> 1. 10.1 2. 10.2 3. 10.3 4. 10.4 5. 10.5 6. 10.6 7. 10.7 8. 10.8 			
⑦ UNIT SELF-TEST QUESTIONS	<ol style="list-style-type: none"> 1. When adding & subtracting polynomials, how do you combine like terms? 2. How do you use distributive property, FOIL, and diagrams to multiply polynomials? 3. What is the method for factoring trinomials? 4. How is factoring & the Zero-Product Property used to solve polynomials? 		⑥ UNIT RELATIONSHIPS
			<p>Factor</p> <p>Solve</p> <p>Calculate</p> <p>Simplify</p>

Vocabulary

Factored form:

written as a product of 2 or more linear factors

$$x^2 + 6x + 9 = \underbrace{(x+3)} \underbrace{(x+3)}$$

$$\underbrace{(x-1)} \underbrace{(x+2)} \underbrace{(x+3)} = 0$$

Zero-product property:

If two numbers are multiplied to get 0, one of them must be = 0.

$$\text{If } A \cdot B = 0$$

Then either $A=0$ or $B=0$

ZERO-PRODUCT PROPERTY

Let a and b be real numbers. If $ab = 0$, then $a = \underline{0}$ or $b = \underline{0}$.

If the product of two factors is zero, then at least one of the factors must be zero

Example 1: Using the Zero-Product PropertySolve the equation $(x + 17)(x - 12) = 0$

$$x + 17 = 0$$

$$-17 \quad -17$$

$$x = -17$$

$$x - 12 = 0$$

$$+12 \quad +12$$

$$x = 12$$

Example 2: Solve a Repeated-Factor EquationSolve $(x - 9)^2 = 0$.

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

$$x - 9 = 0$$

$$+9 \quad +9$$

$$x = 9$$

$$x - 9 = 0$$

$$+9 \quad +9$$

$$x = 9$$

Example 3: Solve a Factored Cubic EquationSolve $(7x + 3)(2x - 1)(x + 5) = 0$.

$$\begin{array}{l}
 \swarrow \\
 7x + 3 = 0 \\
 -3 \quad -3 \\
 \hline
 7x = -3 \\
 \frac{7x}{7} = \frac{-3}{7} \\
 \boxed{x = -\frac{3}{7}}
 \end{array}
 \qquad
 \begin{array}{l}
 \swarrow \\
 2x - 1 = 0 \\
 +1 \quad +1 \\
 \hline
 2x = 1 \\
 \frac{2x}{2} = \frac{1}{2} \\
 \boxed{x = \frac{1}{2}}
 \end{array}
 \qquad
 \begin{array}{l}
 \swarrow \\
 x + 5 = 0 \\
 -5 \quad -5 \\
 \hline
 x = -5 \\
 \boxed{x = -5}
 \end{array}$$

Try It Solve the equation and check the solutions.

1) $(x + 2)(x - 4) = 0$

$$\begin{array}{l}
 \swarrow \\
 x + 2 = 0 \\
 -2 \quad -2 \\
 \hline
 x = -2 \\
 \boxed{x = -2}
 \end{array}
 \qquad
 \begin{array}{l}
 \swarrow \\
 x - 4 = 0 \\
 +4 \quad +4 \\
 \hline
 x = 4 \\
 \boxed{x = 4}
 \end{array}$$

2) $(x - 4)(4x - 8)(3x + 11) = 0$

$$\begin{array}{l}
 \swarrow \\
 x - 4 = 0 \\
 +4 \quad +4 \\
 \hline
 x = 4 \\
 \boxed{x = 4}
 \end{array}
 \qquad
 \begin{array}{l}
 \swarrow \\
 4x - 8 = 0 \\
 +8 \quad +8 \\
 \hline
 4x = 8 \\
 \frac{4x}{4} = \frac{8}{4} \\
 \boxed{x = 2}
 \end{array}
 \qquad
 \begin{array}{l}
 \swarrow \\
 3x + 11 = 0 \\
 -11 \quad -11 \\
 \hline
 3x = -11 \\
 \frac{3x}{3} = \frac{-11}{3} \\
 \boxed{x = -\frac{11}{3}}
 \end{array}$$

3) $2(x + 1)(3x - 2) = 0$

$$\begin{array}{l}
 \swarrow \\
 2 = 0 \\
 \hline
 \text{No solution}
 \end{array}
 \qquad
 \begin{array}{l}
 \swarrow \\
 x + 1 = 0 \\
 -1 \quad -1 \\
 \hline
 x = -1 \\
 \boxed{x = -1}
 \end{array}
 \qquad
 \begin{array}{l}
 \swarrow \\
 3x - 2 = 0 \\
 +2 \quad +2 \\
 \hline
 3x = 2 \\
 \frac{3x}{3} = \frac{2}{3} \\
 \boxed{x = \frac{2}{3}}
 \end{array}$$

10.4 Homework

10.4 p.591 #9-12, 14-36

&

Start Set 1 & 2 "X" wkst