Inspiring Greatness

ISD

INDEPENDENCE SCHOOL DISTRICT

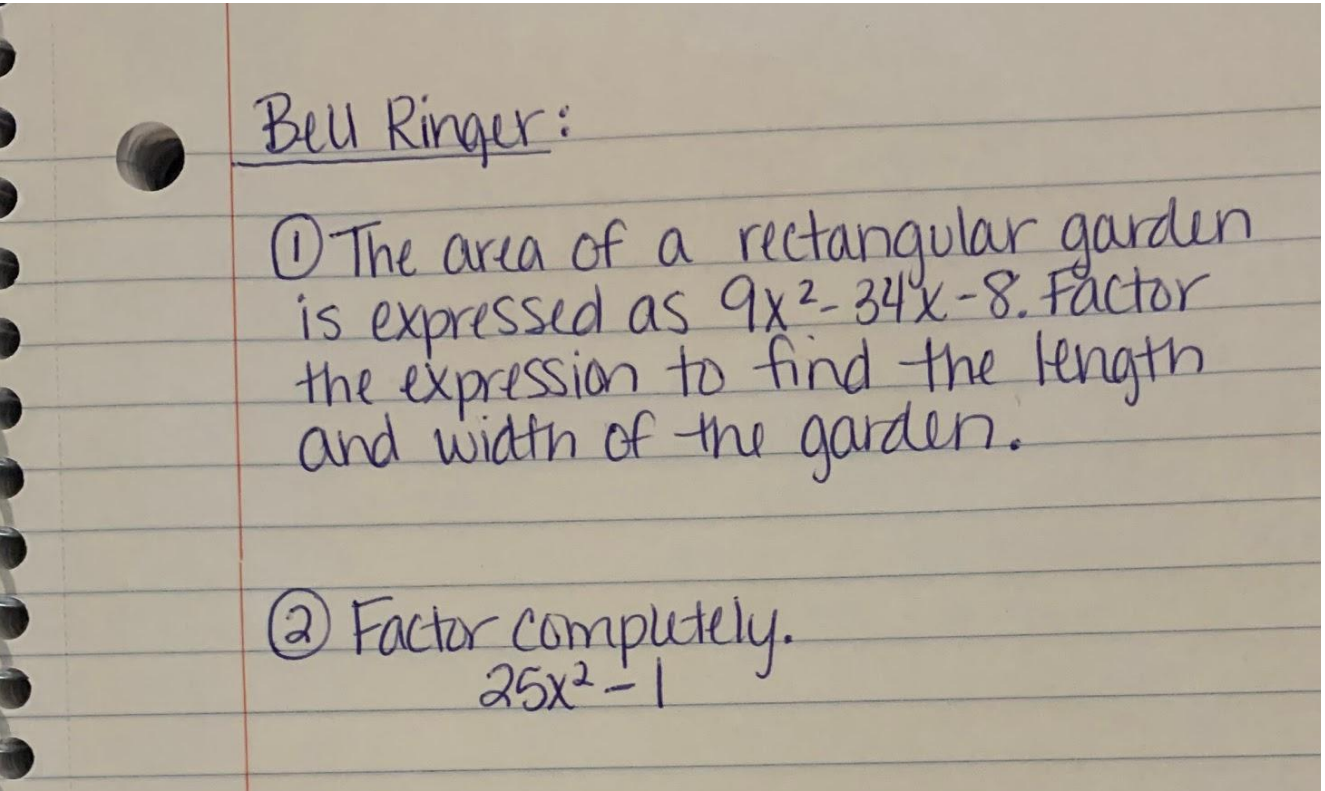
Math Virtual Learning

Algebra 1 S2

April 9, 2020

Algebra 1 S2
Lesson: April 9, 2020

Learning Target:
Students will solve quadratic equations (a>1) by factoring.



Bell Ringer Answer is at the beginning of the Practice Video

Learning Target:
Students will solve quadratic equations (a>1) by factoring.

Let's Get Started on the Lesson:

Watch Video: Solving Quadratic Equations by Factoring (a>1)

Review Activity: Zero Product Property Exercise

(There is an Example problem for Review Activity in the Practice Video)

Links to Previous Lessons(if you need to revisit factoring a>1)

Lesson 7 - Factoring Trinomials (a>1)

Lesson 8 - Factoring Trinomials (a>1 with GCF)

Lesson 10 - Factoring Special Case

Lesson 11 - Factoring Special Case

Practice

Today's practice takes you through a video where you can pause and try the problems at your own speed. Examples are meant to be done together. The practice problems are for you to attempt them on your own and check with the videos.

1. Example 1:
   $3x^2 - 5x = 0$
2. Practice 1:
   $7x^2 + 2x = 0$
3. Practice 2:
   $16x^2 - 4x = 0$

Practice Video

Practice continued

4. Example 2:
   $3x^2 + 14x - 49 = 0$
5. Practice 3:
   $3x^2 - 16x - 7 = 5$
6. Example 3:
   $15x^2 + 80 = -80x$
7. Example 4:
   $12x^2 - 57x + 112 = 6x^2 + x$
8. Practice 4:
   $15x^2 - 3x = 3 - 7x$
9. Practice 5:
   $35x^2 + 22x + 3 = 0$
10. Practice 6:
    $10x^2 - 26x = -12$

Practice continued

Activity:

(Example on the today's practice video)

Solving Quadratic Equations by Factoring

Complete the problems [Hints are on the next slide]

$7x^2 - 4x - 3=0$

Solve each quadratic function by factoring.

1. $3x^2 - 16x - 12 = 0$
2. $7x^2 - 4x + 3 = 0$
3. $2x^2 + 7x = -5$
4. $8x^2 + 21 = -59x$
5. $5x^2 - 14x - 3 = 0$
6. $3x^2 + 5x = 8$

Which of the following are solutions of the polynomial: $3x^2 - 13x + 4$?

A. 1/3
B. 4
C. 12
D. -12
E. -4
F. 1

Independent Practice Hints

Here are some hints to maybe get you started.

Solve each quadratic function by factoring.

1. $3x^2 - 16x - 12 = 0$

-Multiples of -36 that subtract to -16.

2. $7x^2 - 4x - 3 = 0$

-Multiples of -21 that subtracts to -4

3. $2x^2 + 7x = -5$

-Get it equal to zero
-Multiples of 10 that add to 7

4. $8x^2 + 21 = -59x$

-Get it equal to zero
-Multiples of 168 that add to 59

5. $5x^2 - 14x - 3 = 0$

-Multiples of -15 that subtract to -14

6. $3x^2 + 5x = 8$

-Get it equal to zero
-Multiples of -24 that subtract to 5

Which of the following are solutions of the polynomial: $3x^2 - 13x + 4$?

A. 1/3
B. 4
C. 12
D. -12
E. -4
F. 1

-Multiples of 12 that add to -13
-Set Polynomial equal to zero
-2 solutions to select

Answer Key

Once you have completed the problems, check your answers here.

Solve each quadratic function by factoring.

1. $3x^2 - 16x - 12 = 0$

$(x - 6)(3x + 2) = 0$

$x = 6, x = -2/3$

2. $7x^2 - 4x - 3 = 0$

$(x - 1)(7x + 3) = 0$

$x = 1, x = -3/7$

3. $2x^2 + 7x = -5$

$2x^2 + 7x + 5 = 0$

$(x + 1)(2x + 5) = 0$

$x = -1, x = -5/2$

4. $8x^2 + 21 = -59x$

$8x^2 + 59x + 21 = 0$

$(x + 7)(8x + 3) = 0$

$x = -7, x = -3/8$

5. $5x^2 - 14x - 3 = 0$

$(x - 3)(5x + 1) = 0$

$x = 3, x = -1/5$

6. $3x^2 + 5x = 8$

$3x^2 + 5x - 8 = 0$

$(x - 1)(3x + 8) = 0$

$x = 1, x = -8/3$

Which of the following are solutions of the polynomial: $3x^2 - 13x + 4$?

A. 1/3
B. 4
C. 12
D. -12
E. -4
F. 1

$3x^2 - 13x + 4 = 0$

$(x - 4)(3x - 1) = 0$

$x = 4, x = 1/3$

Additional Practice:

Click on the links below to get additional practice and to check your understanding!

Practice Solving Quadratic Equations by Factoring

More Practice with Solving Quadratics by Factoring

(Play Game or Practice with Flashcards)