

Ready, Set, Go!

Ready

Topic: Finding x-intercepts for linear equations.

Find the x-intercept of each equation below. Consider how the format of the given equation either facilitates or inhibits your work.



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1.

$$3x + 4y = 12$$

2.

$$y = 5x - 3$$

3.

$$y - 5 = -4(x + 1)$$

4.

$$y = -4x + 1$$

5.

$$y - 6 = 2(x + 7)$$

6.

$$5x - 2y = 10$$

7. Which of the linear equation formats above facilitates your work in finding x-intercepts? Why?

8. Now go back through problems 1 to 6 and find the y-intercepts? List them here.

Which of the formats above facilitate finding the y-intercept? Why?



## Set

Topic: Solve Quadratic Equations, Connecting Quadratics with Area

For each of the given quadratic equations, describe the rectangle the equation fits with. What constraints have been placed on the dimensions of the rectangle?

9.

$$x^2 + 7x - 170 = 0$$

10.

$$x^2 + 15x - 16 = 0$$

11.

$$x^2 + 2x - 35 = 0$$

12.

$$x^2 + 10x - 80 = 0$$

Solve the quadratic equations below.

13.

$$x^2 + 7x - 170 = 0$$

14.

$$x^2 + 15x - 16 = 0$$

15.

$$x^2 + 2x - 35 = 0$$

16.

$$x^2 + 10x - 80 = 0$$



## Go

Topic: Factoring Expressions

Write each of the expressions below in factored form.

17.

$x^2 - x - 132$

18.

$x^2 - 5x - 36$

19.

$x^2 + 5x + 6$

20.

$x^2 + 13x + 42$

21.

$x^2 + x - 56$

22.

$x^2 - x$

23.

$x^2 - 8x + 12$

24.

$x^2 - 10x + 25$

25.

$x^2 + 5x$

Need Assistance? Check out these additional resources:

<https://www.khanacademy.org/math/trigonometry/polynomial-and-rational/quad-factoring/v/factoring-quadratic-expressions>

