

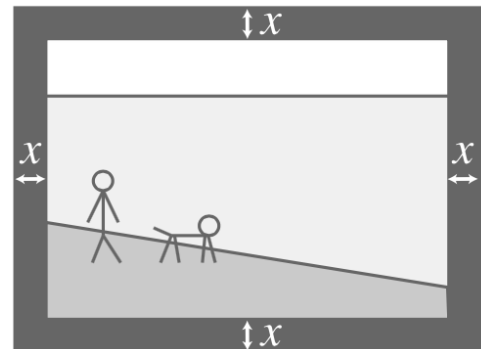
Quadratic Equations and Functions – Part 1
Solving Quadratic Equations by Factoring
Independent Practice

1. Solve $w^2 + 13w + 42 = 0$ by factoring.

2. Solve $v^2 - 8v - 33 = 0$ by factoring.

3. Mario is constructing a frame for a 10 in. by 8 in. photo. He wants the frame to be the same width all the way around and the total area of the frame and photo to be 120 square inches.

What is the dimension of the frame?



4. A function is shown.

$$f(x) = x^2 + 2x - 35$$

One of the zeros of the function is $x = -7$.

What is the other zero of the function?

5. Gabe drops a hammer from an apartment that is 30 meters above the ground. The height of the hammer from the ground (in meters), h , after t seconds is modeled by the function shown.

$$h(t) = -t^2 - t + 30$$

Find the number of seconds it will take for the hammer to hit the ground.

A 0

B 5

C 10

D 30

6. Fill in the missing portions of the function to rewrite $f(x) = 2x^2 + 14x + 24$ to reveal the zeros of the function. What are the zeros of $f(x)$?

Enter your answers in the boxes:

$$g(x) = 2(x + \boxed{})(x + \boxed{})$$

Zeros: and

7. Which of the following quadratic equations has the solution set $\{-20, 9\}$?

$x^2 - 9x + 20 = 0$

$x^2 - 11x + 180 = 0$

$x^2 + 11x - 180 = 0$

$(x + 20)(x - 9) = 0$

$(x - 20)(x + 9) = 0$

$(x - 5)(x - 4) = 0$

