

SOLVING QUADRATIC EQUATIONS**LEARNING GOALS**

- Learn how to solve quadratic equations.

EQUATIONS

A quadratic equation

Solving a quadratic equation

EXAMPLE 1: SOLVE BY FACTORING

Solve for x and check your solution using substitution.

a) $x^2 + 9x + 14 = 0$

b) $2x^2 + 5x = 0$

c) $6x^2 - x = 15$

EXAMPLE 2: PATH OF A STONE

The Path of a stone thrown into a ravine is modeled by the quadratic relation $y = -x^2 + 5x + 84$, where x represents the distance, in metres, travelled horizontally and y represents the height, in meters, above the surface of the river at the bottom of the ravine. How far does the stone travel horizontally before it hits the water?

EXAMPLE 3: DIMENSIONS OF A RECTANGLE

A rectangle has dimensions $3x+1$ and $2x-5$. Its area is 1150 cm^2 . What are its dimensions?

