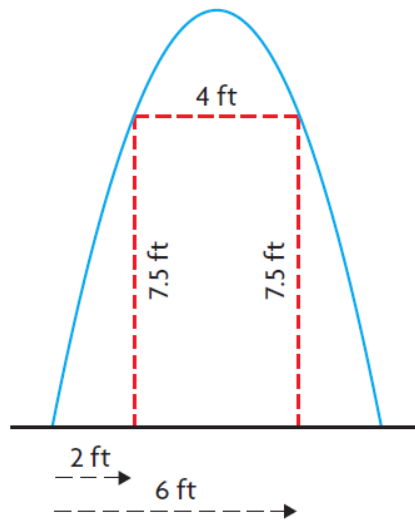


SOLVING QUADRATICS BY FACTORING



EXAMPLE 2 | Solving a quadratic equation using a difference of squares

Determine the roots of the following equation:

$$75p^2 - 192 = 0$$

Verify your solution.

EXAMPLE 3 Solving a quadratic equation with only one root

Solve and verify the following equation:

$$4x^2 + 28x + 49 = 0$$

EXAMPLE 4 | Using reasoning to write an equation from its roots

Tori says she solved a quadratic equation by graphing. She says the roots were -5 and 7 . How can you determine an equation that she might have solved?

In Summary

Key Idea

- Some quadratic equations can be solved by factoring.

Need to Know

- To factor an equation, start by writing the equation in standard form.
- You can set each factor equal to zero and solve the resulting linear equations. Each solution is a solution to the original equation.
- If the two roots of a quadratic equation are equal, then the quadratic equation is said to have one solution.