

# Quadratic Equations- Word Problems



## Overview of problems



*Example Set: A*

*A cannon ball is shot straight up in the air at 115 ft/sec. The ball will be at a height  $h$  after  $t$  seconds as given by the formula below. What time(s) will the ball be 144 ft. in the air?*

$$h = 115t - 16t^2$$



*Example Set: B*

*Find two supplementary angles such that the square of the first angle measures 5 more degrees than four times the measure of the second angle.*



## Example Set: C

*The length of a rectangular field is 5 ft more than the width. When a path of 2 ft is made around the edge of the field the area of the field is doubled. What was the original length and width?*

# Quadratic Equations- Word Problems



## Overview of problems- KEY



### Example Set: A

A cannon ball is shot straight up in the air at 115 ft/sec. The ball will be at a height  $h$  after  $t$  seconds as given by the formula below. What time(s) will the ball be 144 ft. in the air?

$$h = 115t - 16t^2$$

1.61 sec.

5.57 sec.



### Example Set: B

Find two supplementary angles such that the square of the first angle measures 5 more degrees than four times the measure of the second angle.

25°, 155°



## Example Set: C

The length of a rectangular field is 5 ft more than the width. When a path of 2 ft is made around the edge of the field the area of the field is doubled. What was the original length and width?

$$7.68 \text{ ft.} \times 12.68 \text{ ft.}$$