

MATH 1010 ~ Intermediate Algebra Chapter 8: QUADRATIC EQUATIONS AND FUNCTIONS

Chapter 8: **Applications of Quadratic Equations**

Objectives:

- ★ Set up and solve problems using quadratic equations.

$$3x^2 - 2x - 5 = 0$$

1) Height of a Projected Object

An object is projected vertically upward at an initial velocity of 64 feet per second from a height of 192 feet.

The height h at time t is given by $h = -16t^2 + 64t + 192$.

- After how many seconds is the height 256 ft?
- When does the object hit the ground?

2) Geometry

The perimeter of my computer screen is 72 inches. The diagonal distance is 26 inches.

What are the dimensions of the screen?

3) Reduced Rates

The Glee Club charters a bus to attend a competition. The cost of the bus is \$480. To lower the bus fare per person, the club invites non-members to go along. When two non-members join the trip, the fare per person is decreased by \$1.00. How many people are taking the bus to the competition?