Date:

Objective:

Example 1: Find the zeros for $10 = 4x^2 - 4x - 5$

<u>STEPS</u>
1. In standard form and equal to 0

2. Factor (a time c, what adds to b)

3. Set each factor equal to 0 (zero product property)

4. Solve each equation for x

5. Write answers as ordered pairs(x-intercepts)

***Finding the zeros means the same as solving for the variable.

Example 2: Find the zeros for $-10x = 8x^2 - 16x - 5$

Practice: **Read and solve the following situations. Be sure to define your variable and show all your work.**

1. A toy rocket is launched from the top of a 48-foot hill. The rocket's initial upward velocity is 32 feet per second and its height, h, at any given second, t, is modeled by the equation $h = -16t^2 + 32t + 48$. How long was the rocket in the air?

      Where does the initial height go in the equation?

      Where does the initial velocity go in the equation?

      Define your variables.

      Write the equation that will answer the question in the story.

      Solve the equation. Show work.

      Explain your answer in a complete sentence.

2. The area of a rectangle is 60 square feet. If the length is 17 feet less than the width, what is the width? Remember the formula for area of a rectangle is length times width.

Define width: Define length: Given area: Area formula:

Equation:

Solve: