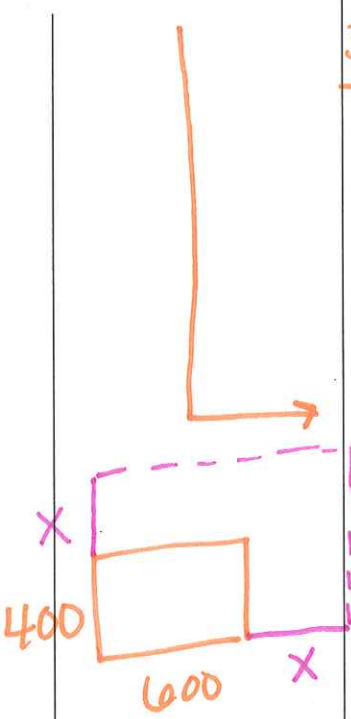


Name: \_\_\_\_\_

**Aim#3: 4.3** How can we use our knowledge factoring to solve quadratic equations?

Mrs. Catrine  
NHS-Algebra 2H  
Sept. 8, 2016



Guiding Questions	Notes/Diagrams/Illustrations
<p>What is a solution to a quadratic equation?</p> <p>Describe the different ways to solve.</p>	<p>When the <u>eqn = zero</u>, <u>roots</u> or <u>zeros</u> <u>zero product</u> property</p> <p>* roots, zeros, intercepts, solutions</p> <p>1. <math>x^2 - 5x = 36</math>  <math>x^2 - 5x - 36 = 0</math>      <math>\frac{-36}{-5}</math>      <math>\frac{(x-9)(x+4)}{x=9 \quad   \quad x=-4} = 0</math></p> <p>2. <math>5x^2 + 6 = 17x</math>  <math>5x^2 - 17x + 6 = 0</math>      <math>\frac{5x^2 - 15x - 2x + 6}{5x(x-3) - 2(x-3)} = 0</math></p>
<p>Where do we see quadratics in the real world?</p> 	<p>3. <math>27x^2 - 48 = 0</math>  <math>3(9x^2 - 16) = 0</math>  <math>\frac{3(3x+4)(3x-4)}{-4 \quad   \quad 4 \quad   \quad 3} = 0</math></p> <p>4. <math>5p^2 - 16p + 15 = 4p - 5</math>  <math>5p^2 - 20p + 20 = 0</math>      <math>5(p-2)(p-2) = 0</math>  <math>5(p^2 - 4p + 4) = 0</math>      <math>5(p-2)^2 = 0</math>  <math>p = 2</math></p> <p>5. A town has a nature preserve with a rectangular field that measures 600 meters by 400 meters. The town wants to <u>double</u> the area of the field by adding land as shown. Find the new dimensions of the field.</p> <p><math>(600)(400) \cdot 2 = 480,000</math>      <math>400 + 200 = 600</math>  <math>(600 + x)(400 + x) = 480,000</math>      <math>600 + 200 = 800</math>  <math>240,000 + 1000x + x^2 = 480,000</math>  <math>x^2 + 1000x - 240,000 = 0</math>      <math>\frac{(x+1200)(x-200)}{x = -1200 \quad   \quad x = 200}</math></p>
<p><b>Summary</b> What is one NEW thing you learned today?</p>	<p><math>x = -1200</math>      <math>x = 200</math></p>

# FACTORIZING FLOWCHART

