

Graphing Quadratic Equations with 2 variable

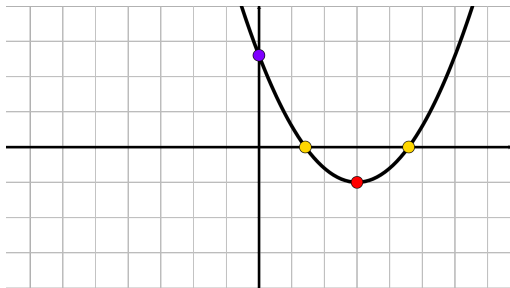
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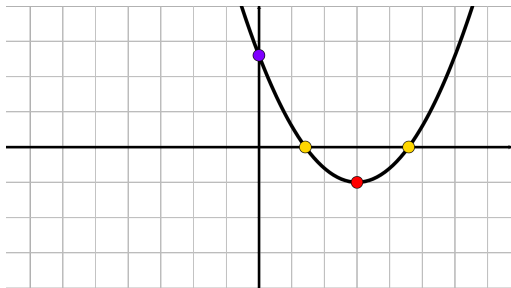
To graph a quadratic equation, we need to find our important points:



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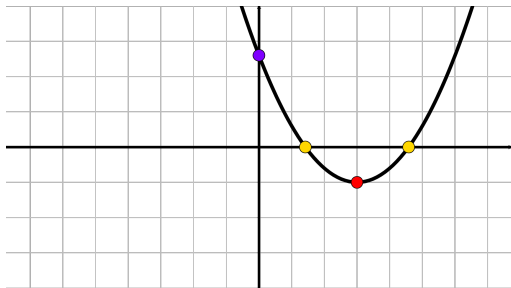


The y -intercept

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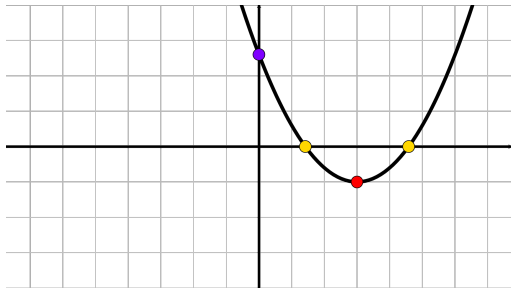
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The x -intercept(s)

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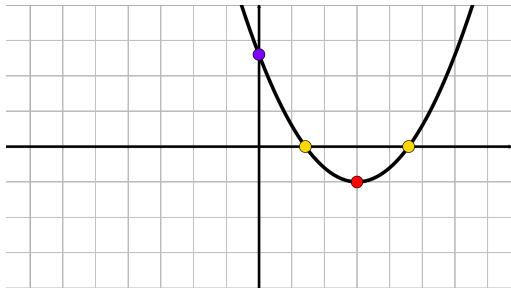
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The **y-intercept**: [▶ Like with lines](#) the **y-intercept** happens when $x = 0$

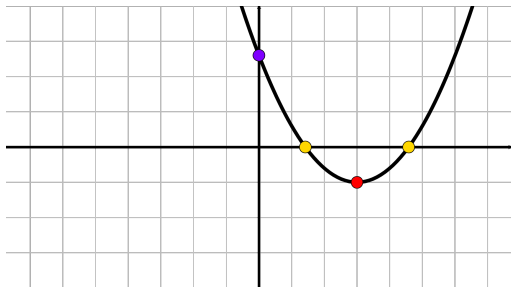
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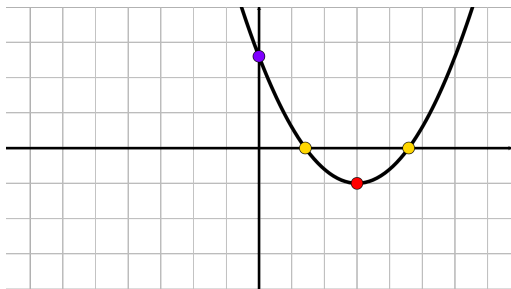
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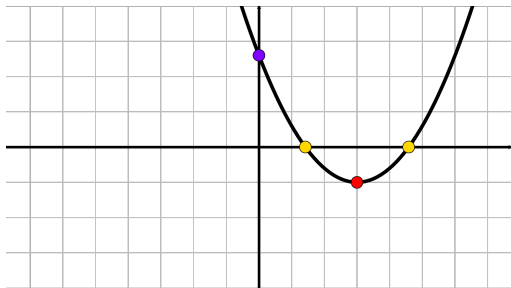
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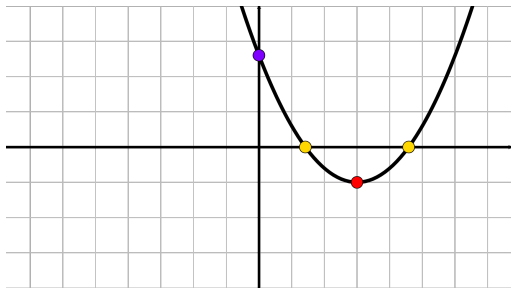
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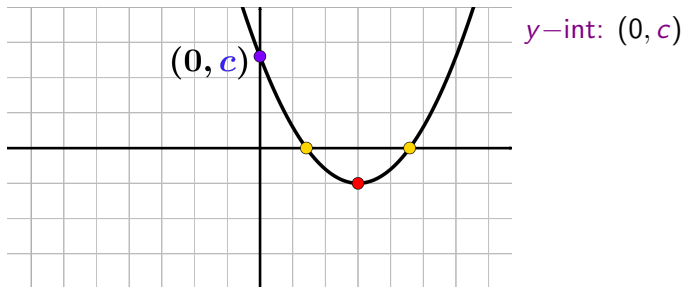
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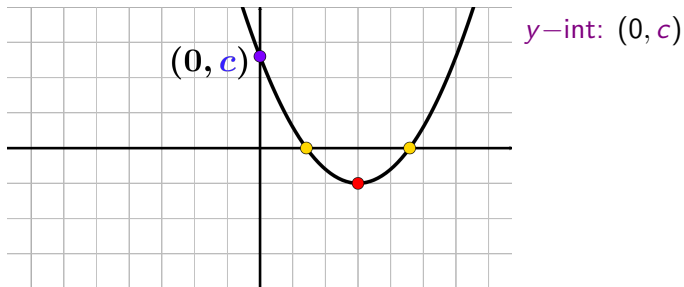
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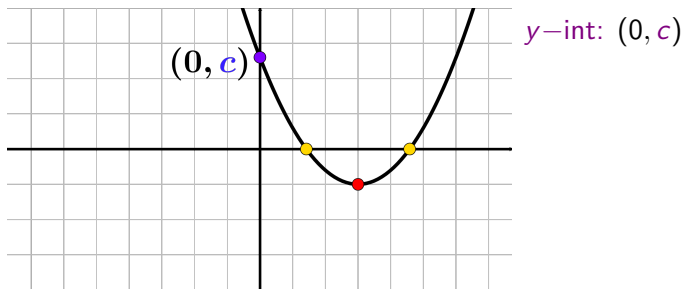
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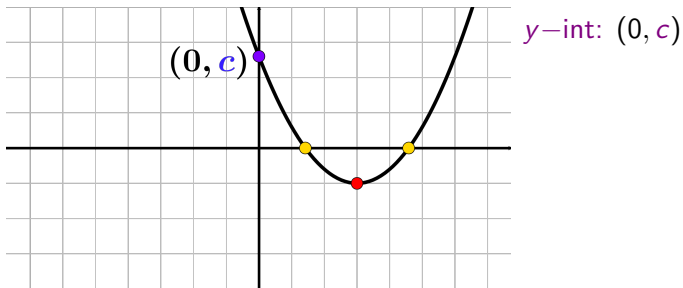
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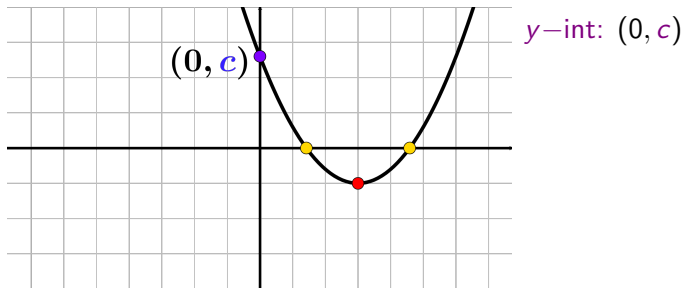
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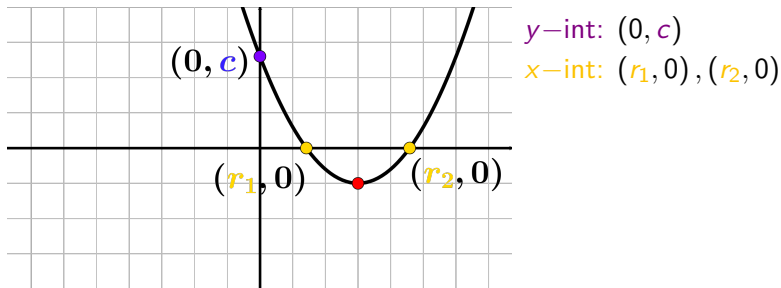
We can solve this using the Quadratic Formula, $r_{1,2} = \frac{-(b) \pm \sqrt{(b)^2 - 4ac}}{2a}$

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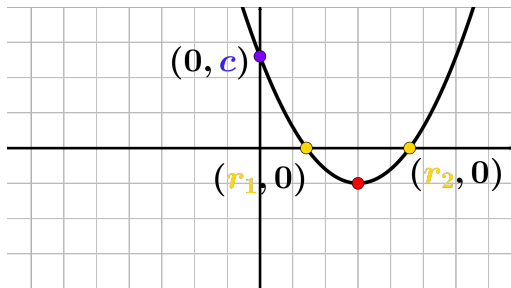
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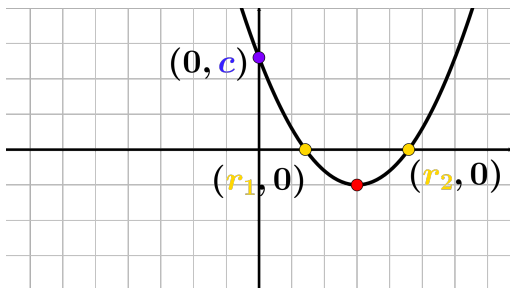
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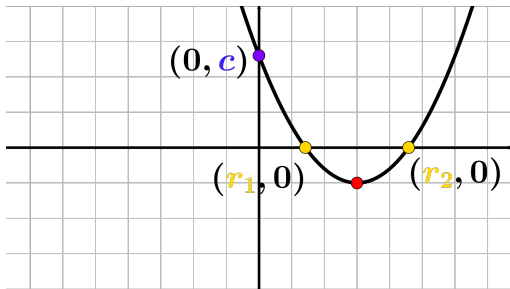
The vertex happens at the point (h, k)

▶ We saw when we built the Quadratic Formula that $h = \frac{-b}{2a}$

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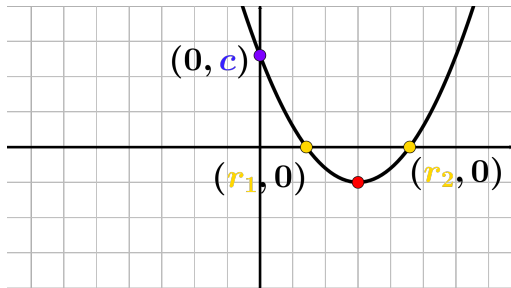
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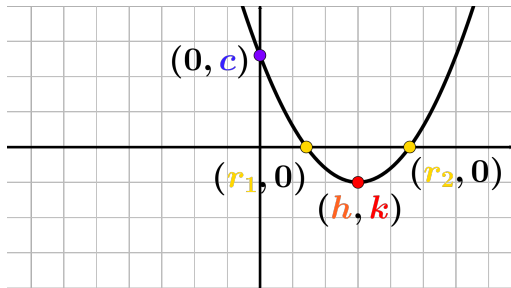
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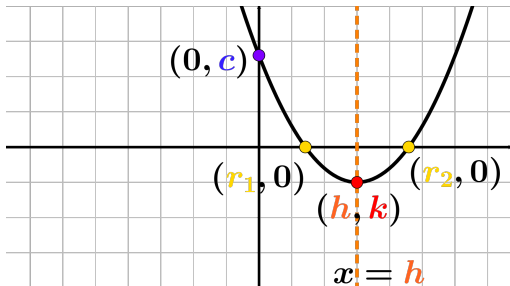
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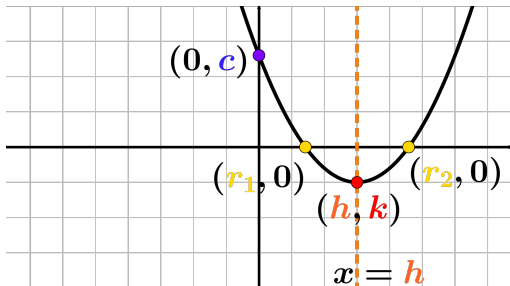
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Called: *The Line of Symmetry*

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