

# T-Notes

T-notes are a method of notetaking commonly used in problem-based classes that help students connect each step being performed to the concept. To use t-notes, you place the problem and concept at the top. Then you work out the problem step-by-step in the left column and write out the explanation for each step in the right column. T-notes should be used each time you learn a new concept or formula.

<b>Problem and Concept</b>	
Find x-intercepts for $5x^2 + 6x + 1 = 0$ using the quadratic formula, $x = \frac{-b \pm \sqrt{(b^2 - 4ac)}}{2a}$	
<b>Work the problem</b>  1) $5x^2 + 6x + 1 = 0$  $a=5 \quad b=6 \quad c=1$  2) $x = \frac{-6 \pm \sqrt{(6^2 - 4(5)(1))}}{2(5)}$  3) $x = \frac{-6 \pm \sqrt{36 - 20}}{10}$  $x = \frac{-6 \pm \sqrt{16}}{10}$  4) $x = \frac{-6 + \sqrt{16}}{10}$  $x = \frac{-2}{10} \quad x = -0.2$  5) $x = \frac{-6 - \sqrt{16}}{10}$  $x = \frac{-10}{10} \quad x = -1$  6) $5(-0.2)^2 + 6(-0.2) + 1 = 0 \quad \checkmark$  $5(-1)^2 + 6(-1) + 1 = 0 \quad \checkmark$	<b>Explain the steps and why you do each one</b>  1) Identify coefficients to use in formula  2) Input coefficients into quadratic formula  3) Simplify the contents of the square root  4) Solve for addition portion  5) Solve for the subtraction portion  6) Check answer by plugging in your solution into original problem

## T-Notes Template

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<b>Problem and Concept</b>	
Work the problem	Explain the steps and why you do each one