

Sample Vocabulary Notecards

(updated: 12/7/2022)

Learning vocabulary is an essential component of proficiency in the course material. “Vocabulary” means terminology, formulas, and facts. The most effective way to learn vocabulary is to make a notecard for each vocabulary item. You can use physical cards, like 3 by 5 inch index cards, or you can use some equivalent electronic medium.

A complete notecard must include: the term, formula or fact name; the definition of the term or statement of the fact; and at least one example illustrating the definition or fact. Here are some examples.

FRONT of card, or LEFT column of list: <i>term, formula or fact name</i>	BACK of card, or RIGHT column: <i>definition, statement, example(s)</i>
quadratic polynomial	A quadratic polynomial is an expression of the form $ax^2 + bx + c$, where x is a variable and a, b, c are constants. Example: $2x^2 - 3x + 7$ is a quadratic polynomial with $a = 2$, $b = -3$, $c = 7$.
quadratic formula	The quadratic formula If $ax^2 + bx + c = 0$ and $a \neq 0$ then $x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$ If $b^2 - 4ac < 0$, then there are no real solutions. Example: For $x^2 + 2x - 3 = 0$, use $a = 1$, $b = 2$, $c = -3$ to get $x = \frac{-2 \pm \sqrt{4 + 12}}{2} = -1 \pm 2 = -3, 1.$

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linear sequence	<p>A sequence is <i>linear</i> if there is a fixed constant d so that each term in the sequence is equal to the previous term plus d.</p> <p>Example with $d = 4$ $3, 7, 11, 15, \dots$</p>
exponential sequence	<p>A sequence is <i>exponential</i> if there is a fixed constant r so that each term in the sequence is equal to the previous term times r.</p> <p>Example with $r = -2$ $1, -2, 4, -8, 16, \dots$</p>