Vocabulary Flash Cards

completing the square *Chapter 3 (p. 112)*	**complex number** *Chapter 3 (p. 104)*
discriminant *Chapter 3 (p. 124)*	**imaginary number** *Chapter 3 (p. 104)*
imaginary unit *i* *Chapter 3 (p. 104)*	**pure imaginary number** *Chapter 3 (p. 104)*
quadratic equation in one variable *Chapter 3 (p. 94)*	**Quadratic Formula** *Chapter 3 (p. 122)*

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A number written in the form $a + bi,$ where *a* and *b* are real numbers $5 + 2i$	To add a term *c* to an expression of the form $x^2 + bx$ such that $x^2 + bx + c$ is a perfect square trinomial $x^2 + 6x + 9 = (x + 3)^2$ $x^2 + bx + \left(\frac{b}{2}\right)^2 = \left(x + \frac{b}{2}\right)^2$
A number written in the form $a + bi,$ where *a* and *b* are real numbers and $b \neq 0$ $10 - 2i$	The expression $b^2 - 4ac$ in the Quadratic Formula The value of the discriminant of the equation $3x^2 - 2x - 7 = 0$ is $b^2 - 4ac = (-2)^2 - 4(3)(-7) = 88.$
A number written in the form $a + bi,$ where $a = 0$ and $b \neq 0$ $5i$	The square root of $-1,$ denoted $i = \sqrt{-1}$ $i = \sqrt{-1}$
The solutions of the quadratic equation $ax^2 + bx + c = 0$ are $x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a},$ where *a*, *b*, and *c* are real numbers and $a \neq 0.$ To solve $2x^2 + 13x - 7 = 0,$ substitute 2 for *a*, 13 for *b*, and –7 for *c* in the Quadratic Formula. $x = \frac{-13 \pm \sqrt{13^2 - 4(2)(-7)}}{2(2)} \rightarrow x = \frac{1}{2}$ and $x = -7$	An equation that can be written in the standard form $ax^2 + bx + c = 0,$ where *a*, *b*, and *c* are real numbers and $a \neq 0$ $2x^2 - 3x + 8 = 0$

Vocabulary Flash Cards

quadratic inequality in one variable *Chapter 3 (p. 142)*	**quadratic inequality in two variables** *Chapter 3 (p. 140)*
root of an equation *Chapter 3 (p. 94)*	**system of nonlinear equations** *Chapter 3 (p. 132)*
zero of a function *Chapter 3 (p. 96)*	

Vocabulary Flash Cards

An inequality of the form $y < ax^2 + bx + c$, $y > ax^2 + bx + c$, $y \leq ax^2 + bx + c$, or $y \geq ax^2 + bx + c$, where a, b, and c are real numbers and $a \neq 0$ $y < -x^2 - 2x - 1$	An inequality of the form $ax^2 + bx + c < 0$, $ax^2 + bx + c > 0$, $ax^2 + bx + c \leq 0$, or $ax^2 + bx + c \geq 0$, where a, b, and c are real numbers and $a \neq 0$ $x^2 - 3x - 4 < 0$
A system of equations where at least one of the equations is nonlinear $y = x^2 + 2x - 4$ Equation 1 $y = 2x + 5$ Equation 2	A solution of an equation The roots of $x^2 - x - 6 = 0$ are $x = -2$ and $x = 3$.
	An x-value of a function f for which $f(x) = 0$ The zeroes of $f(x) = x^2 - 4x - 45$ are $x = 9$ and $x = -5$.