End-of-Course Assessment

ISTEP+: Algebra I Graduation Examination

Reference Sheet

Equation of a Line		
Slope-Intercept Form: $y = mx + b$ where $m =$ slope and $b = y$-intercept	**Point-Slope Form:** $y - y_1 = m(x - x_1)$ where $m =$ slope and (x_1, y_1) is a point on the line	**Standard Form of a Linear Equation:** $Ax + By = C$ where A and B are not both zero

Slope of a Line

Let (x_1, y_1) and (x_2, y_2) be two points in the plane.

$$\text{slope} = \frac{\text{change in } y}{\text{change in } x} = \frac{y_2 - y_1}{x_2 - x_1}$$

where $x_2 \neq x_1$

Standard Form of a Quadratic Function

$$f(x) = ax^2 + bx + c$$

where $a \neq 0$

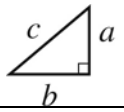
axis of symmetry : $x = -\frac{b}{2a}$

Quadratic Formula

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

where $ax^2 + bx + c = 0$ and $a \neq 0$

Pythagorean Theorem



$$a^2 + b^2 = c^2$$