# End-of-Course Assessment

# ISTEP+: Algebra I Graduation Examination

# Reference Sheet

| Equation of a Line | | |
|---|---|---|
| **Slope-Intercept Form:**<br>$y = mx + b$<br>where $m =$ slope and $b = y$-intercept | **Point-Slope Form:**<br>$y - y_1 = m(x - x_1)$<br>where $m =$ slope and $(x_1, y_1)$ is a point on the line | **Standard Form of a Linear Equation:**<br>$Ax + By = C$<br>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 $a \neq 0$

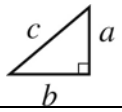
axis of symmetry : $x = -\frac{b}{2a}$

## Quadratic Formula

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

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

## Pythagorean Theorem




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