Algebra 1
Reference Sheet

Exponent Rules

$x^a \cdot x^b = x^{a+b}$

$(xy)^a = x^a y^a$

$(x^a)^b = x^{a \cdot b}$

$\frac{x^a}{x^b} = x^{a-b}$

$x^{-a} = \frac{1}{x^a}$

$x^0 = 1$

$x^1 = x$

$\left(\frac{x}{y}\right)^a = \frac{x^a}{y^a}$

Linear Formulas

Slope

$m = \frac{y_2 - y_1}{x_2 - x_1}$

Slope-Intercept Form

$y = mx + b$

Point-Slope Form

$y - y_1 = m(x - x_1)$

Standard Form

$Ax + By = C$

Special Cases of Multiplying/Factoring Polynomials

$a(b + c) = ab + ac$

$(a + b)^2 = a^2 + 2ab + b^2$

$(a - b)^2 = a^2 - 2ab + b^2$

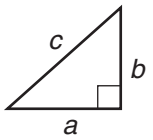
$(a + b)(a - b) = a^2 - b^2$

Quadratic Equation Standard Form

$ax^2 + bx + c = 0$

Pythagorean Theorem

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



Álgebra 1
Hoja de Referencia

Reglas de Exponentes

$x^a \bullet x^b = x^{a+b}$

$(xy)^a = x^a y^a$

$(x^a)^b = x^{a \bullet b}$

$\frac{x^a}{x^b} = x^{a-b}$

$x^{-a} = \frac{1}{x^a}$

$x^0 = 1$

$x^1 = x$

$\left(\frac{x}{y}\right)^a = \frac{x^a}{y^a}$

Fórmulas Lineales

Pendiente

$m = \frac{y_2 - y_1}{x_2 - x_1}$

Forma pendiente-ordenada de una recta en pendiente

$y = mx + b$

Forma punto-pendiente de una recta

$y - y_1 = m(x - x_1)$

Forma Estándar

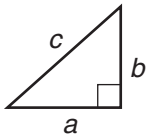
$Ax + By = C$

Casos Especiales de Multiplicar o Factorear Polinomios

$a(b + c) = ab + ac$
$(a + b)^2 = a^2 + 2ab + b^2$
$(a - b)^2 = a^2 - 2ab + b^2$
$(a + b)(a - b) = a^2 - b^2$

Ecuación Cuadrática, Forma Estándar

$ax^2 + bx + c = 0$

Teorema de Pitágoras

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