Algebra Final Exam
Formula sheet

Exponential growth and decay $A = i(1 \pm r)^t$

Quadratic formula

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

Vertex form of a quadratic $y = a(x - h)^2 + k$

Standard form:

a) of a square root equation $y = a\sqrt[2]{x - h} + k$

b) of a rational equation $y = \frac{a}{x-h} + k$

c) of a quadratic equation $y = ax^2 + bx + c$

d) of an exponential equation $y = a^{x-h} + k$

Pythagorean Theorem $A^2 + B^2 = C^2$

Distance formula $d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$

Factored form of a parabola $a(x \pm b)(x \pm c)$

Difference of two squares $a^2 - b^2 = (a + b)(a - b)$

Perfect Square $(a \pm b)^2 = a^2 \pm 2ab + b^2$