

STAAR ALGEBRA II REFERENCE MATERIALS



GENERAL FORMULAS

Slope of a line $m = \frac{y_2 - y_1}{x_2 - x_1}$

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

FACTORING

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

Difference of cubes $a^3 - b^3 = (a - b)(a^2 + ab + b^2)$

Sum of cubes $a^3 + b^3 = (a + b)(a^2 - ab + b^2)$

LOGARITHMS

Product $\log_b x + \log_b y = \log_b(xy)$

Quotient $\log_b x - \log_b y = \log_b\left(\frac{x}{y}\right)$

Power $\log_b x^y = y \log_b x$

CONIC SECTIONS

General form $Ax^2 + Bx + Cy^2 + Dy + E = 0$

Circle $(x - h)^2 + (y - k)^2 = r^2$

Parabola $(x - h)^2 = 4p(y - k)$ or $(y - k)^2 = 4p(x - h)$

Ellipse $\frac{(x - h)^2}{a^2} + \frac{(y - k)^2}{b^2} = 1$ or $\frac{(y - k)^2}{a^2} + \frac{(x - h)^2}{b^2} = 1$

Hyperbola $\frac{(x - h)^2}{a^2} - \frac{(y - k)^2}{b^2} = 1$ or $\frac{(y - k)^2}{a^2} - \frac{(x - h)^2}{b^2} = 1$

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To download a free, complete version of the STAAR Algebra II Reference Materials, visit www.tea.state.tx.us/student.assessment/staar/.

Provide students with a durable reference chart for year-round use, so that they can fully understand what material is provided on the charts and how to use it to solve problems.

Teacher's Tip
Give your students a little extra motivation to hang on to their reference charts during the school year. Tell your students, "If you have your reference chart on class test days, then you may use it during my tests. If you do not have your reference chart ... (too bad)."