

Cheat Sheet

Some tips and tricks to keep in mind...

Linear

In the form $Ax + By = C$, the slope is $-A/B$

Quadratics

Sum of Solutions of Quadratic in Standard Form ($ax^2 + bx + c$): $-b/a$

Product of Solutions of Quadratic in Standard Form: c/a

x-value of vertex in Standard Form: $-b/2a$

Exponent Rules

Product Rule: $x^a \cdot x^b = x^{a+b}$

Power of Power: $(x^a)^b = x^{ab}$

Quotient Rule: $\frac{x^a}{x^b} = x^{a-b}$

Negative Exponent: $x^{-a} = \frac{1}{x^a}$

Power of Product: $(xy)^a = x^a y^a$

Fractional Exponent: $(x)^{\frac{a}{b}} = \sqrt[b]{x^a}$

Power of Quotient: $\left(\frac{x}{y}\right)^a = \frac{x^a}{y^a}$

Radical Rules

Adding with Same Base: $a\sqrt{b} + c\sqrt{b} = (a+c)\sqrt{b}$

Multiplying Roots: $a\sqrt{b} \times c\sqrt{d} = (a \times c)\sqrt{b \times d}$

Taking the Root of a Fraction: $\sqrt{\frac{x}{y}} = \frac{\sqrt{x}}{\sqrt{y}}$