

Math Foundations 10 Formula Sheet

Exponent Laws

$a^m a^n = a^{m+n}$	$\frac{a^m}{a^n} = a^{m-n}$
$(a^m)^n = a^{mn}$	$\left(\frac{a}{b}\right)^m = \frac{a^m}{b^m}$
$(ab)^m = a^m b^m$	$a^{-m} = \frac{1}{a^m}$
$a^{\frac{m}{n}} = \sqrt[n]{a^m}$	$a^0 = 1$

Linear Relations

The Slope of a Line:

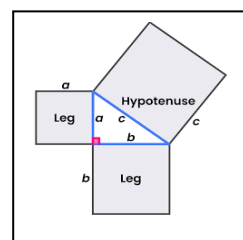
- Slope = $m = \frac{\text{rise}}{\text{run}} = \frac{\Delta y}{\Delta x} = \frac{y_2 - y_1}{x_2 - x_1}$

The Equation of a Line:

- Slope-Intercept Form: $y = mx + b$
- General Form: $Ax + By + C = 0$
- Point-Slope Form: $y - y_1 = m(x - x_1)$

Trigonometry (Right Triangles)

- All triangle angles add to 180°
- Pythagorean Theorem: $a^2 + b^2 = c^2$



- Remember to check that your calculator is in DEGREE mode.
 - SOH CAH TOA
 - $\sin\theta = \frac{\text{opposite}}{\text{hypotenuse}}$ $\cos\theta = \frac{\text{adjacent}}{\text{hypotenuse}}$ $\tan\theta = \frac{\text{opposite}}{\text{adjacent}}$