All 12 Prerequisites Are Taught in Prior Courses

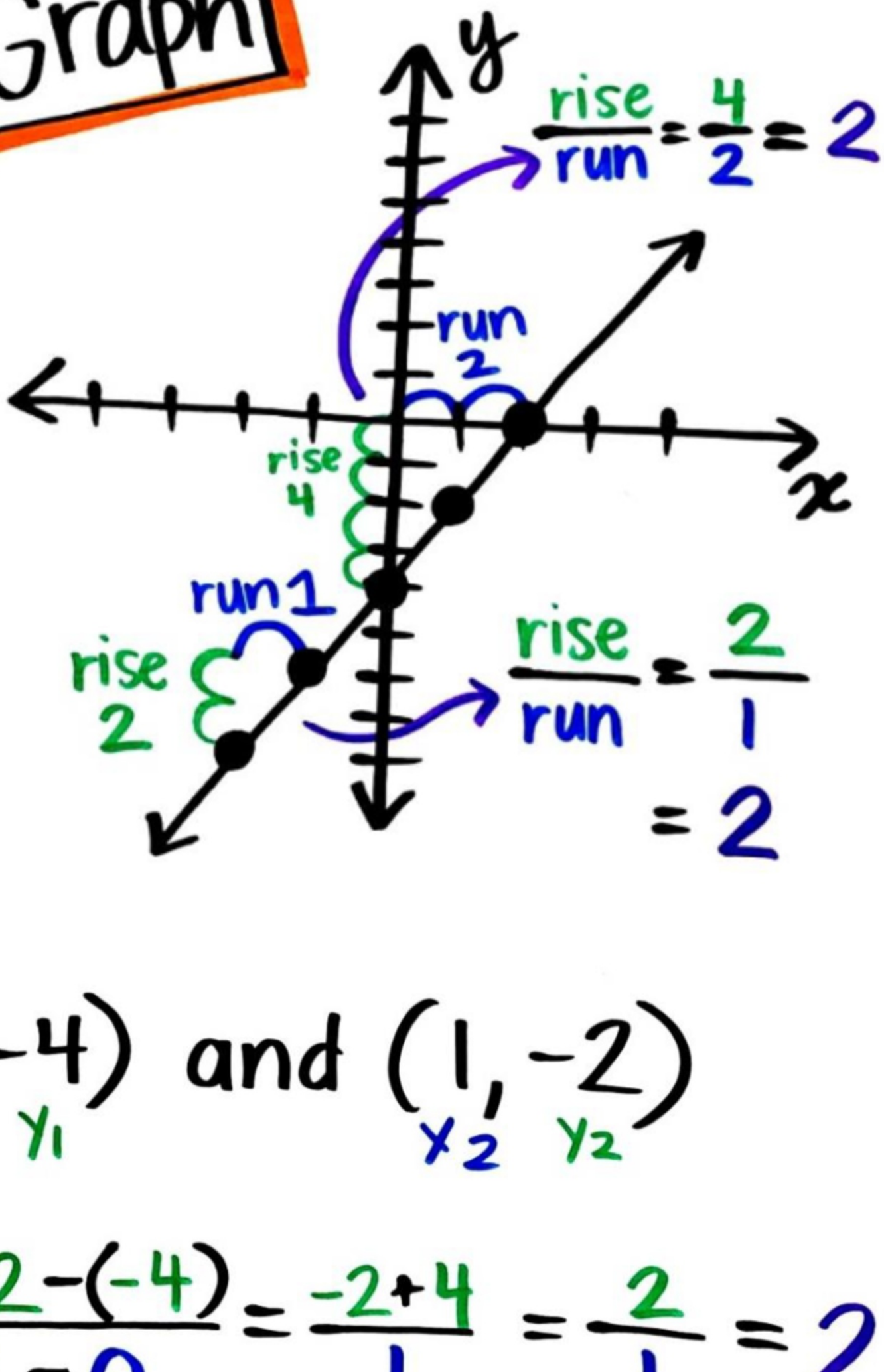
For Success in AP Precalculus

Expected Prior Knowledge and Skills	Algebra 1	Geometry	Algebra 2
Proficiency with linear functions	✓	✓	✓
Proficiency in polynomial addition and multiplication	✓		✓
Proficiency in factoring quadratic trinomials	✓		✓
Proficiency in using the quadratic formula	✓		✓
Proficiency in solving right triangle problems involving trigonometry		✓	✓
Proficiency in solving linear and quadratic equations and inequalities	✓		✓
Proficiency in algebraic manipulation of linear equations and expressions	✓	✓	
Proficiency in solving systems of equations in two and three variables	✓		✓
Familiarity with piecewise-defined functions	✓		✓
Familiarity with exponential functions and rules for exponents	✓		✓
Familiarity with radicals (e.g., square roots, cube roots)	✓	✓	
Familiarity with complex numbers			✓

Calculating SLOPE

$y = 2x - 4$

Graph



Two Points $(0, -4)$ and $(1, -2)$

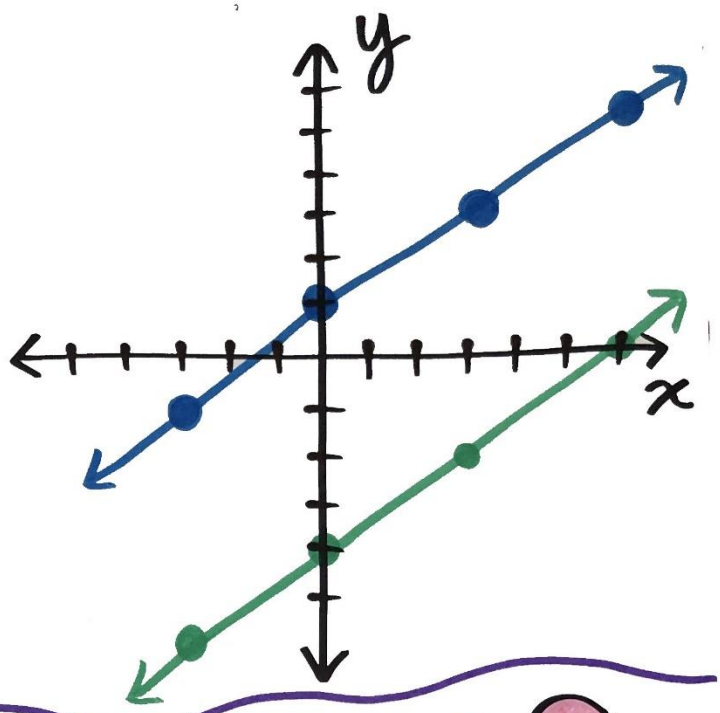
x_1 y_1 x_2 y_2

$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{-2-(-4)}{1-0} = \frac{-2+4}{1} = \frac{2}{1} = 2$$

parallel Lines

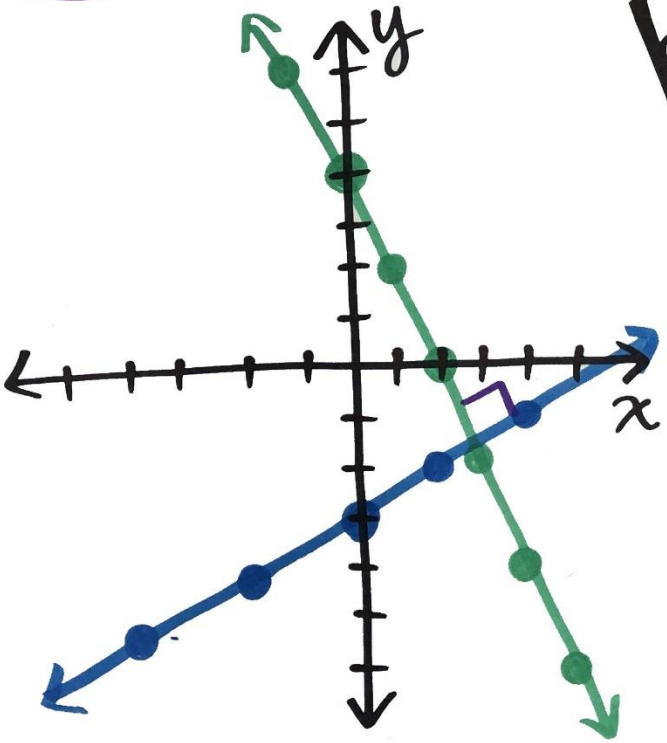
SAME slope

- $y = \frac{2}{3}x - 4$
- $y = \frac{2}{3}x + 1$



TYPES of LINES

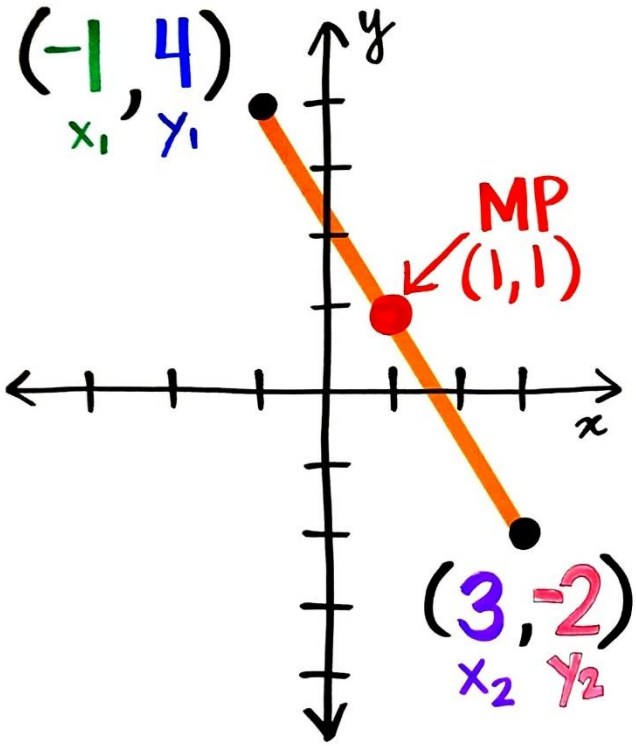
perpendicular Lines



NEGATIVE RECIPROCAL slopes

- $y = -2x + 4$
- $y = \frac{1}{2}x - 3$

Distance & Midpoint FORMULAS



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

$$d=\sqrt{(3-(-1))^2+(-2-4)^2}$$

$$d=\sqrt{(4)^2+(-6)^2}$$

$$d=\sqrt{16+36}$$

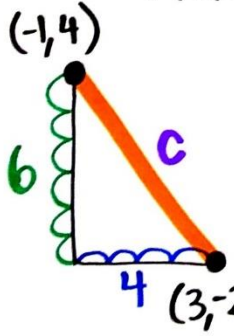
$$d=\sqrt{52}=\sqrt{4}\sqrt{13}=\boxed{2\sqrt{13}}$$

$$MP=\left(\frac{x_1+x_2}{2},\frac{y_1+y_2}{2}\right)$$

$$MP=\left(\frac{-1+3}{2},\frac{4+(-2)}{2}\right)$$

$$MP=\boxed{(1,1)}$$

PYTHAGOREAN THEOREM



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

$$6^2+4^2=c^2$$

$$36+16=c^2$$

$$52=c^2$$

$$\sqrt{52}=c$$

$$\boxed{2\sqrt{13}}=c$$