Slope of a Line
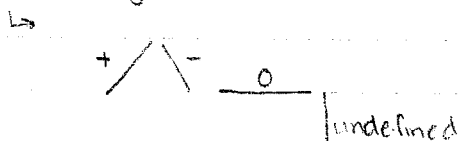
Carissa
Pre Calc 10 B

- the slope describes the steepness of a line.
- bigger number → steeper
- the sign tells us the direction
  ↳

$$+ \diagup \quad \diagdown \, - \quad \underline{\quad 0 \quad} \\ \Big| \text{undefined}$$
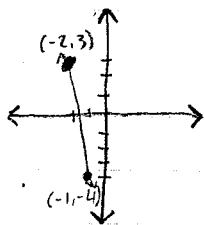
$$\text{SLOPE} - \frac{\text{rise}}{\text{run}} \quad \frac{\Delta y}{\Delta x}$$

example: find the slope given two points –
1. locate 2 points
2. sketch △ triangle
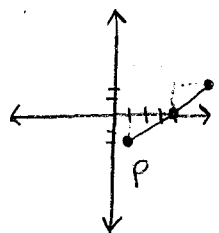3. count rise and run
4. use slope formula to get fraction
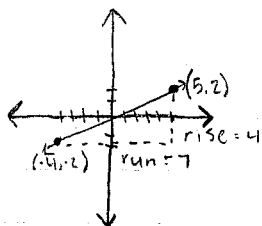
$$\frac{\text{rise}}{\text{run}} : \frac{4}{7}$$

$$\frac{\text{rise}}{\text{run}} : \frac{-7}{1} = -7$$

example: draw a line with a slope of $\frac{2}{3}$ that goes through point P at $(1, -2)$ –

$$\frac{2}{3} \begin{array}{l} \text{– Rise} \\ \text{– Run} \end{array}$$

$\oplus$ ↗ overall this direction

example: find the missing value —
    slope = 4/3   rise = ?   run = 9

   $\dfrac{4}{3} = \dfrac{r}{9}$ * use <u>slope</u> formula

   r = 4 × 9 ÷ 3   * cross-multiply ÷ divide

   rise = 12