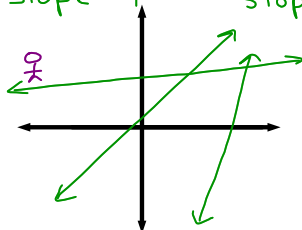
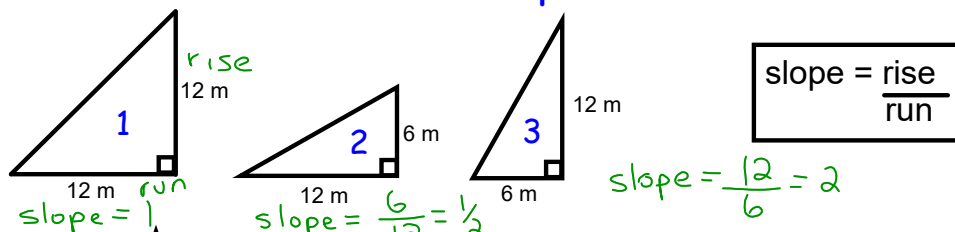
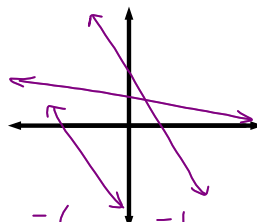
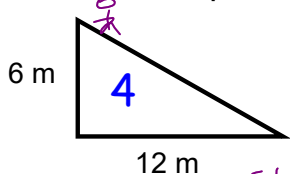


Slope



All uphill lines have positive slopes.

Consider ramp 4:

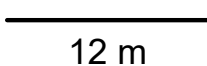


All downhill lines have negative slopes.

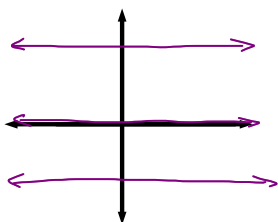
$\text{slope} = \frac{-6}{12} = -\frac{1}{2}$ or $-\frac{1}{2}$ or $-\frac{1}{2}$

Last two ramps..

Horizontal Ramp



$\text{slope} = \frac{0}{12} = 0$

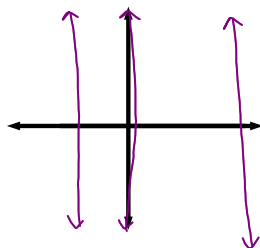


Any horizontal line has a slope of zero

Vertical Ramp

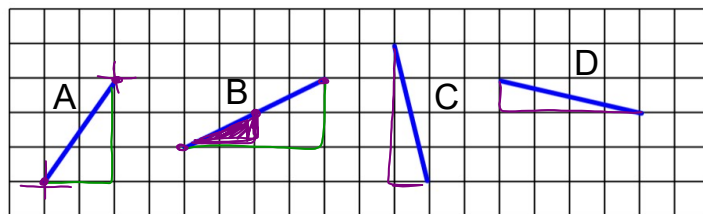
12 m

$\text{slope} = \frac{12}{0} = \text{DNE}$
 $= \text{DNE}$
 Undefined



Any vertical line has an undefined slope

ex) Find the slope of each segment:



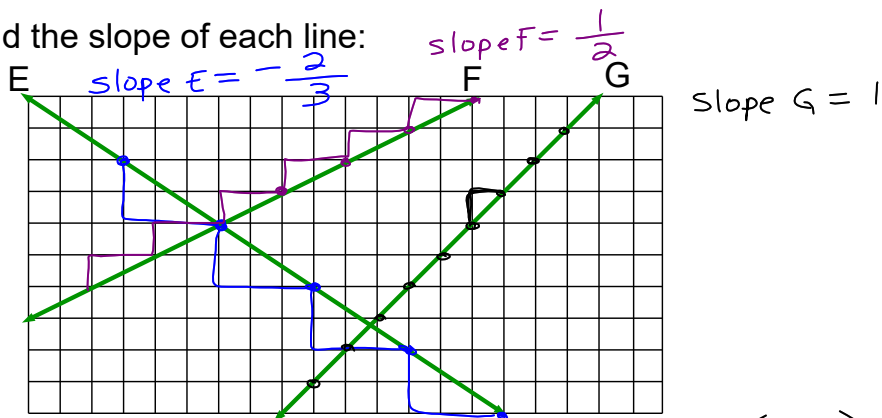
$\text{slope A} = \frac{3}{2}$

$\text{slope B} = \frac{2}{4} = \frac{1}{2}$

$\text{slope C} = -\frac{4}{1} = -4$

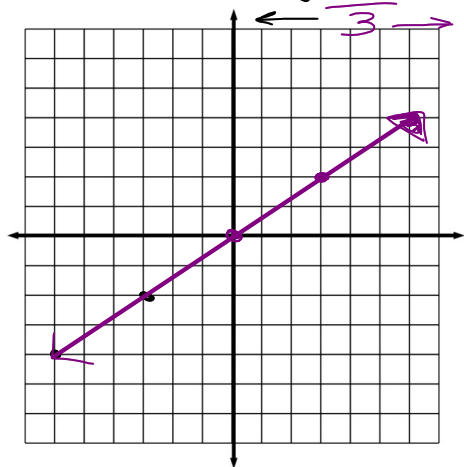
$\text{slope D} = -\frac{1}{4}$

ex) Find the slope of each line:

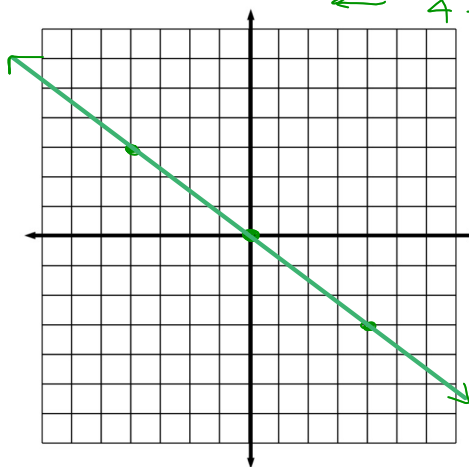


ex) Draw a line starting at the origin given: centre (0,0)

a) a slope of $2/3$ \downarrow 2 \uparrow 3



b) a slope of $-3/4$ \uparrow -3 \downarrow 4



Ex) Find slope of:

$$\text{slope} = \frac{\text{rise}}{\text{run}} = \frac{y_2 - y_1}{x_2 - x_1}$$

a) A(4, 5) and B(-3, -1)

$$\begin{aligned} & \begin{matrix} x_1 & y_1 & & x_2 & y_2 \\ & & & & \end{matrix} \\ m &= \frac{-1 - 5}{-3 - 4} \\ &= \frac{-6}{-7} = \frac{6}{7} \end{aligned}$$

b) C(10, 6) and D(6, 4)

$$\begin{aligned} & \begin{matrix} x_2 & y_2 & & x_1 & y_1 \\ & & & & \end{matrix} \\ m &= \frac{6 - 4}{10 - 6} \\ &= \frac{2}{4} = \frac{1}{2} \end{aligned}$$

$$\begin{aligned} m &= \frac{4 - 6}{6 - 10} \\ &= \frac{-2}{-4} \end{aligned}$$

Purple WS