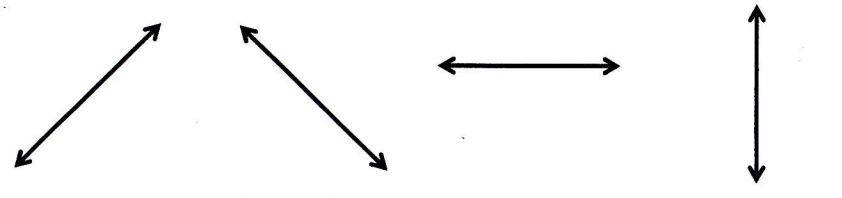
5.2 – SLOPE

Slope: the rate of vertical change to horizontal change

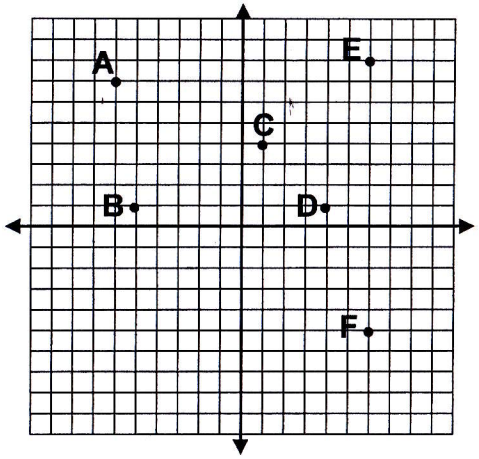
$$\text{SLOPE} = \frac{\text{rise}}{\text{run}}$$

READ THE GRAPH FROM LEFT TO RIGHT



Positive Slope | Negative Slope | Zero Slope | Undefined Slope (und)

Find the slope between each given point.



1. C and D: $-\frac{3}{3} = 1$
2. B and C: $+\frac{3}{6} = \frac{1}{2}$
3. E and F: und
4. A and E: $+\frac{1}{12} = \frac{1}{12}$
5. B and D: 0
6. B and F: $-\frac{6}{11}$

SLOPE FORMULA

Given two points (x_1, y_1) and (x_2, y_2)

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

Find the slope of the line through the points:

1. $(-2, 3)$ and $(4, 8)$

$m = \frac{8-3}{4-(-2)}$

$= \frac{8-3}{4+2}$

$= \frac{5}{6}$

2. $(7, -6)$ and $(-5, 2)$

$m = \frac{2+6}{-5-7}$

$= \frac{8}{-12}$

$= -\frac{2}{3}$

3. $(1, 2)$ and $(5, 2)$

$m = \frac{2-2}{5-1}$

$= \frac{0}{4}$

$= 0$

4. $(2, 1)$ and $(2, 5)$

$m = \frac{5-1}{2-2}$

$= \frac{4}{0}$

und