# 7 - 5
# Slope of a Line

**slope:** $(m)$ $\dfrac{rise}{run}$

**Formula...** $M = \dfrac{Y - Y}{X - X}$

# Ex: Find the slope of the line.

A(1, 4)

B(2, 1)

$m = \dfrac{-3}{1}$

$m = -3$

**Find the slope of the line that passes through each pair of points.**

Ex: M(0, 2) and N(- 2, - 1)

$$m = \frac{Y-Y}{X-X} \qquad m = \frac{2+ +1}{0+ +2} = \boxed{\frac{3}{2}}$$

Ex: S(2, 4) and T(5, - 1)

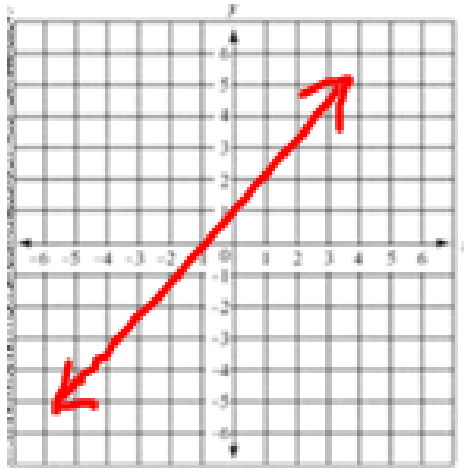$$m = \frac{4+ +1}{2+5} = \frac{5}{-3} = \boxed{-\frac{5}{3}}$$

**Find the slope of the line that passes through each pair of points.**
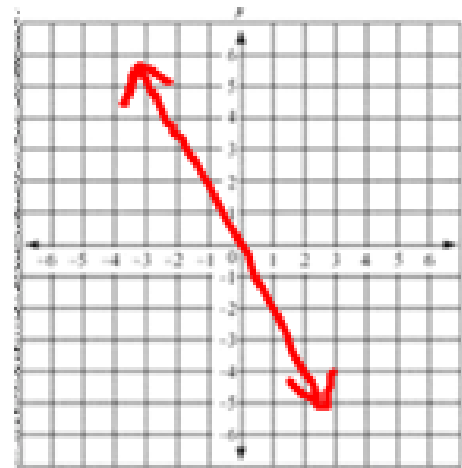
Ex:  A(1, 3) and B(- 4, 3)

$$m = \frac{3-3}{1++4} = \frac{0}{5} = \boxed{0}$$
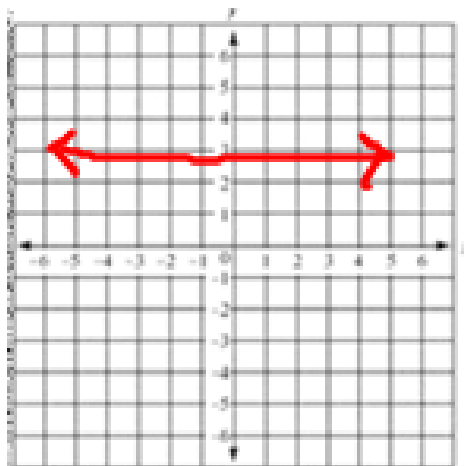
Ex:  X(6, - 3) and Y(6, 2)
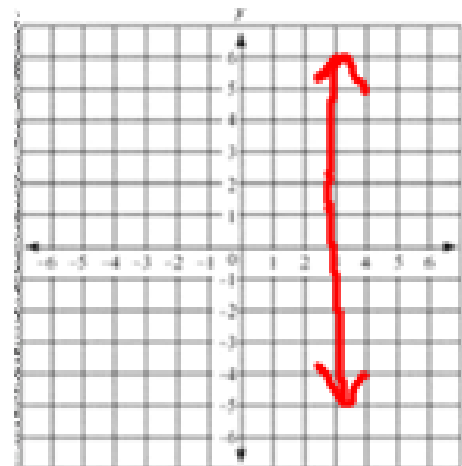
$$m = \frac{-3-2}{6-6} = \frac{-5}{0} \boxed{undefined}$$

positive

negative

zero

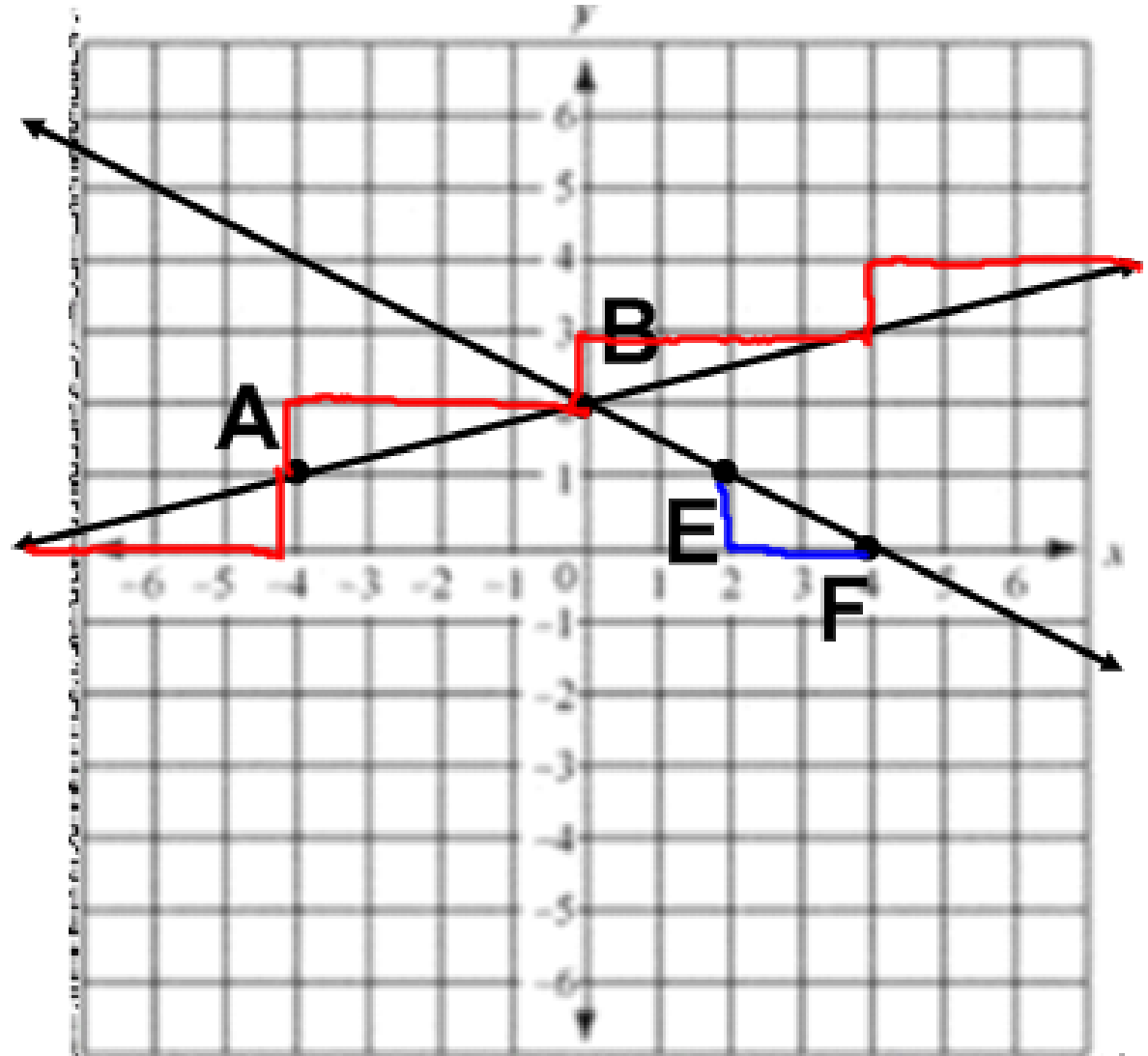undefined

# Find the slope of each line.

Ex: line AB

$$\frac{1}{4}$$

Ex: line EF

$$\frac{-1}{2}$$

**always look
L→R

# Homework:

## 7 - 5 WS