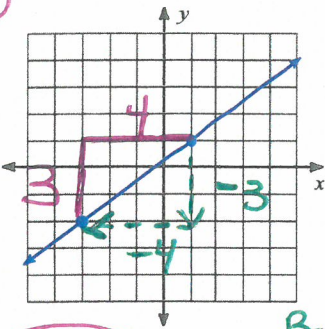


4.4c Slope (rise over run)

Find the slope of each line. Clearly show work and use the correct variable (m)

1)



Show this work that is in Red

Top  $\Delta$

$m = \frac{3}{4}$

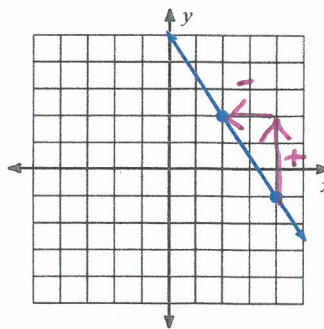
Label Variable

Bottom  $\Delta$

$m = \frac{-3}{-4}$

$m = 3/4$

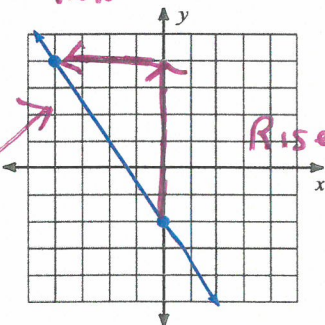
2)



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

3)

Run



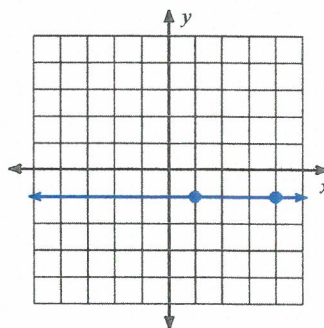
Rise

$m = -m$

$m = \frac{6}{-4}$

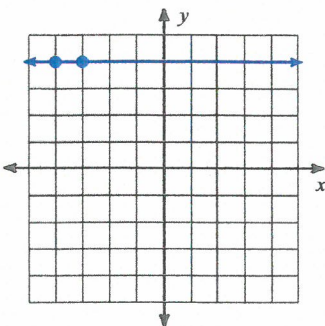
$m = -3/2$

4)



$m = \frac{0}{3} \Rightarrow m = 0$

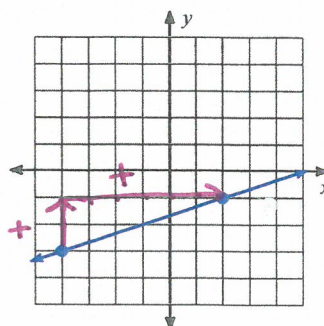
5)



$m = \frac{\text{Rise}}{\text{Run}} = \frac{0}{1}$

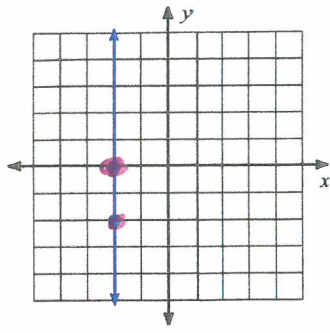
$m = 0$

6)



$m = \frac{2}{6}$   
 $m = 1/3$

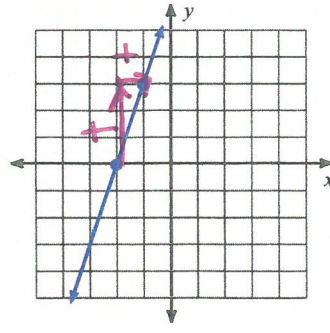
7)



$$m = \frac{\text{Rise}}{\text{Run}} = \frac{2}{0}$$

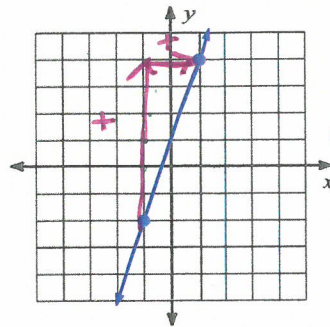
$m = \text{UNDEFINED}$

8)



$m = \frac{3}{1}$  or 3

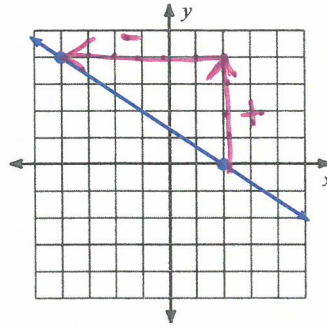
9)



← Think +m

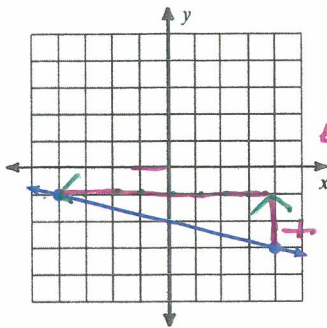
$$m = \frac{6}{2} \quad \boxed{m = 3 \text{ or } 3/1}$$

10)



$m = \frac{4}{-6}$   
 $m = -2/3$

11)

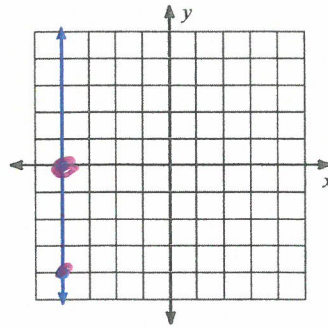


← Think -m

$$m = \frac{-2}{-8}$$

$$\boxed{m = -1/4}$$

12)



$m = \frac{0}{2}$   
 $m = \text{UNDEFINED}$

**NOTES**

↑ +m      ↓ -m      → m=0      ↓ m=UNDEFINED

## 4.4d Practice (slope with 2 points)

Date

Period

Find the slope of the line through each pair of points.

1) (5, -13), (19, 15)

$$m = \frac{15 - (-13)}{19 - 5} = \frac{28}{14}$$

WRITE!

$$m = \frac{2}{1} \text{ OR } 2$$

Reduced

2) (19, 19), (5, 12)

$$m = \frac{12 - 19}{5 - 19} = \frac{-7}{-14}$$

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

3) (13, 12), (3, 16)

$$m = \frac{16 - 12}{3 - 13} = \frac{4}{-10}$$

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

Reduce

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

4) (-7, -16), (-9, -1)

$$m = \frac{-1 - (-16)}{-9 - (-7)} = \frac{15}{-2}$$

$$m = -\frac{15}{2} \text{ OR } \frac{15}{-2}$$

5) (6, 9), (6, -10)

$$m = \frac{-10 - 9}{6 - 6} = \frac{-19}{0}$$

$$m = \text{UNDEFINED}$$

PT1 - PT 2

$$m = \frac{9 - (-10)}{6 - 6} = \frac{19}{0}$$

m = UNDEFINED

6) (12, 3), (12, -10)

$$m = \frac{-10 - 3}{12 - 12} = \frac{-13}{0}$$

$$m = \text{UNDEFINED}$$

NOTES

Given 2 pts

 $(x_1, y_1), (x_2, y_2)$   
 PT1 ↑ PT2 ↑

$$m = \frac{\Delta y}{\Delta x}$$

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

OR

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

7)  $(1, -10), (13, -10)$

$$m = \frac{-10 - 10}{13 - 1} = \frac{0}{12}$$

$\Delta y$

$\Delta x$

$m = 0$

8)  $(-10, -2), (18, -2)$

$$m = \frac{-2 - 2}{18 - (-10)} = \frac{0}{28}$$

$m = 0$

9)  $(19, 10), (17, -15)$

$$m = \frac{-15 - 10}{17 - 19} = \frac{-25}{-2}$$

$m = \frac{25}{2}$

10)  $(12, 7), (-18, -3)$

$$m = \frac{-3 - 7}{-18 - 12} = \frac{-10}{-30}$$

$m = \frac{1}{3}$

11)  $(4, -13), (0, 13)$

$$m = \frac{13 - 13}{0 - 4} = \frac{0}{-4}$$

$m = -\frac{13}{2}$

Reduced  
improper  
fraction

12)  $(-16, 4), (-20, 20)$

$$m = \frac{20 - 4}{-20 - (-16)} = \frac{16}{-4}$$

$m = -4$