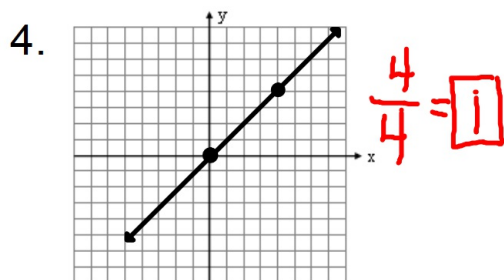
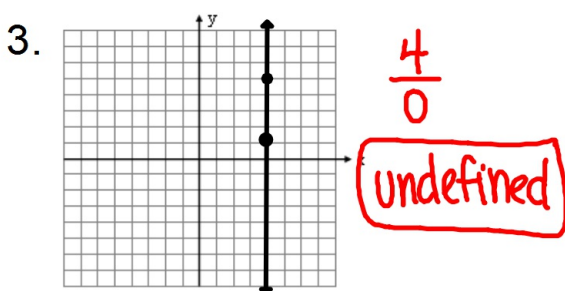
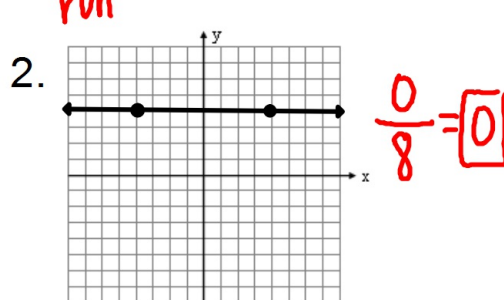
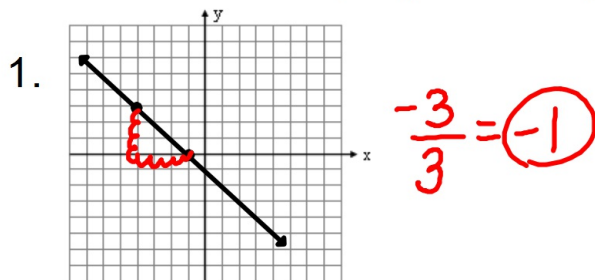


Determine the slope given the graph. $\frac{\text{rise}}{\text{run}}$



What can you tell me about their slopes?

Parallel Lines

→ same slope

$$y = \frac{1}{2}x - 1$$

$$y = \frac{1}{2}x + 2$$

Perpendicular Lines

→ flip, change sign

$$y = 3x + 3$$

$$y = -\frac{1}{3}x - 2$$

Determine whether \overleftrightarrow{KM} and \overleftrightarrow{ST} are \parallel , \perp , or neither.

1. $K(-1, -8)$, $M(1, 6)$, $S(-2, -6)$, $T(2, 10)$

$$m_{KM} = \frac{6 - (-8)}{1 - (-1)}$$

$$= \frac{14}{2}$$

$$= 7$$

$$m_{ST} = \frac{10 - (-6)}{2 - (-2)}$$

$$= \frac{16}{4}$$

$$= 4$$

conclusion: neither

2. K(-5, -2), M(5, 4), S(-3, 6), T(3, -4)

$$\begin{aligned} m_{KM} &= \frac{4 - (-2)}{5 - (-5)} \\ &= \frac{6}{10} \\ &= \frac{3}{5} \end{aligned}$$

$$\begin{aligned} m_{ST} &= \frac{-4 - 6}{3 - (-3)} \\ &= \frac{-10}{6} \\ &= -\frac{5}{3} \end{aligned}$$

conclusion: \perp

3. K(-4, 10), M(2, -8), S(1, 2), T(4, -7)

$$\begin{aligned} m_{KM} &= \frac{-8 - 10}{2 - (-4)} \\ &= \frac{-18}{6} \\ &= -3 \end{aligned}$$

$$\begin{aligned} m_{ST} &= \frac{-7 - 2}{4 - 1} \\ &= \frac{-9}{3} \\ &= -3 \end{aligned}$$

conclusion: \parallel

Turn-in:
p.193 (16, 20, 22, 28, 32)

HW:
wkst 3.3