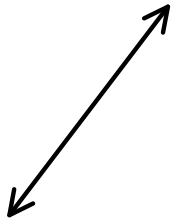


# Slope

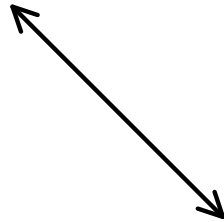
Slope - the ratio of the vertical rise to the horizontal run

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

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



$m = \text{positive}$



$m = \text{negative}$

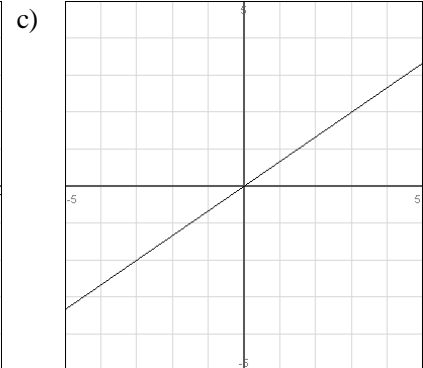
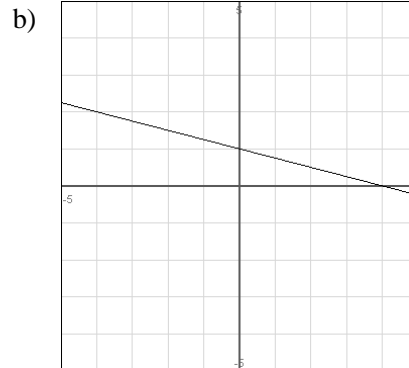
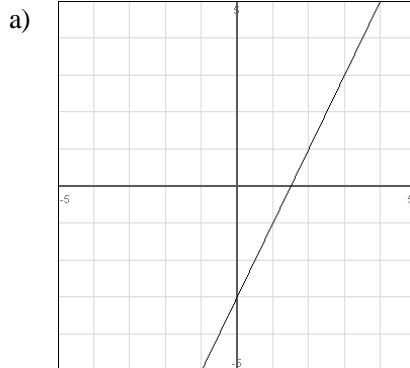


$m = 0$



$m = \text{undefined}$

1. Find the slope of each line.



2. Find the coordinates of two points on the line with the given equation. Then use the points to find the slope of the line.

a)  $y = -2x - 4$

b)  $3x + 4y = 12$

3. Find the slope of each line with the given rise and run.

a) rise =  $-4$ , run =  $20$

b) rise =  $.5$ , run =  $8$

4. Find the slope of the line that contains each pair of points.

a)  $(-8, 4), (2, -18)$

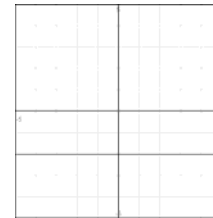
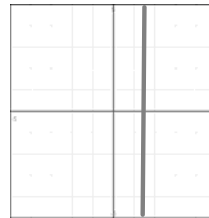
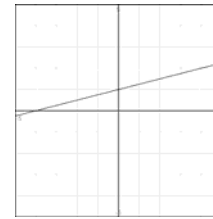
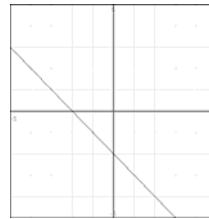
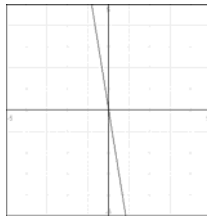
b)  $(-2, 1), (6, 15)$

c)  $(5, -4), (2, -4)$

d)  $(7, -1), (7, 2)$

5. Match the graph with the correct slope.

- a)  $m = 3$
- b)  $m = \frac{1}{4}$
- c)  $m = -6$
- d)  $m = 0$
- e)  $m = \text{undefined}$
- f)  $m = -1$



6. Find the missing coordinate so that the slope of the line between the points  $(3,4)$  and  $(x,-8)$  is  $-\frac{1}{2}$ .