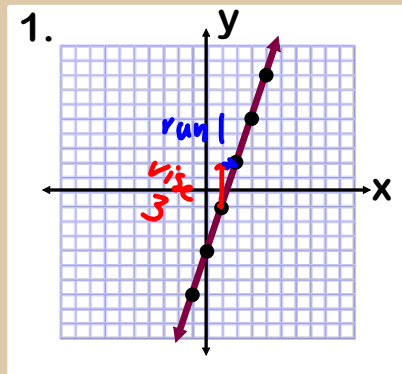


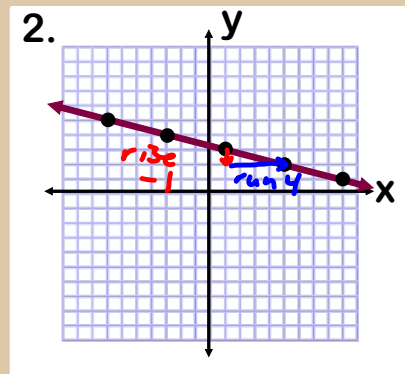
## SLOPE OF A LINE

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

Find the slope of the following lines.



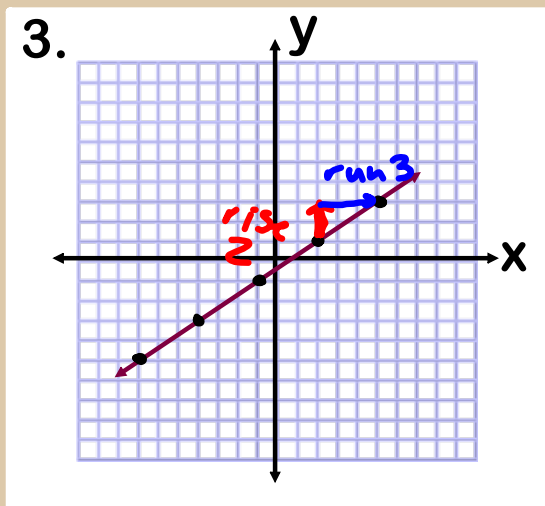
$$\text{Slope} = \frac{3}{1} = 3$$



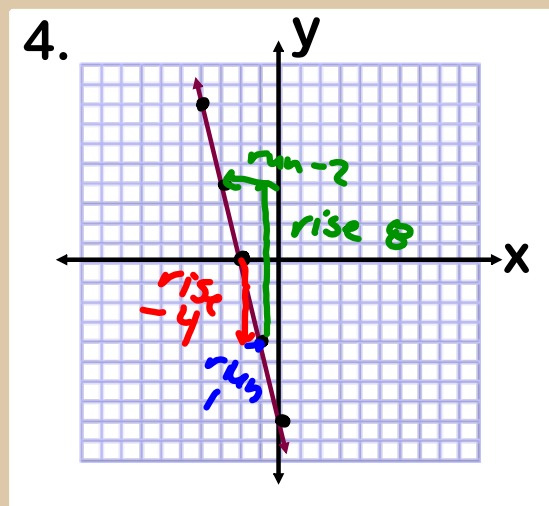
$$\text{Slope} = \frac{-1}{4}$$

..

Find the slope of the following lines.

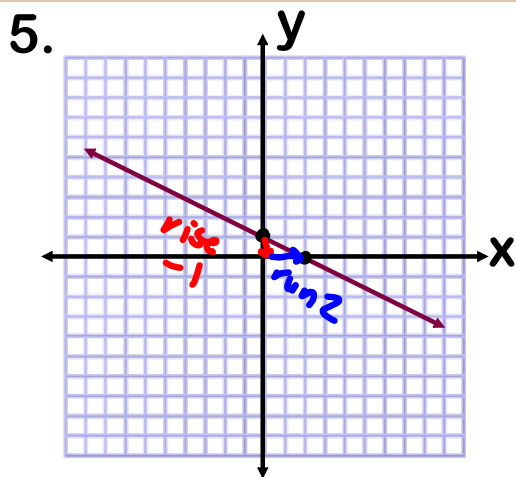


$$\text{Slope} = \frac{2}{3}$$

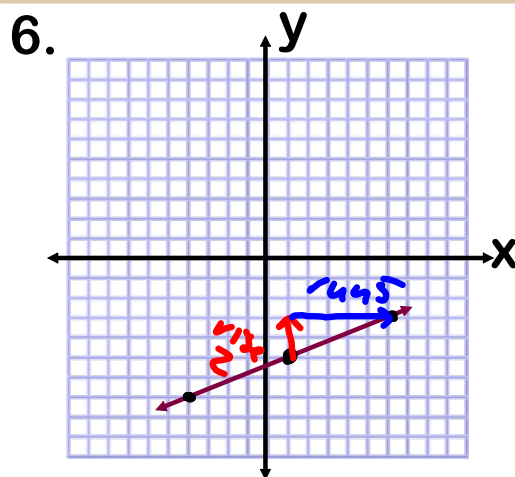


$$\text{Slope} = \frac{-4}{-1} = -4$$

## Find the slope of the following lines.



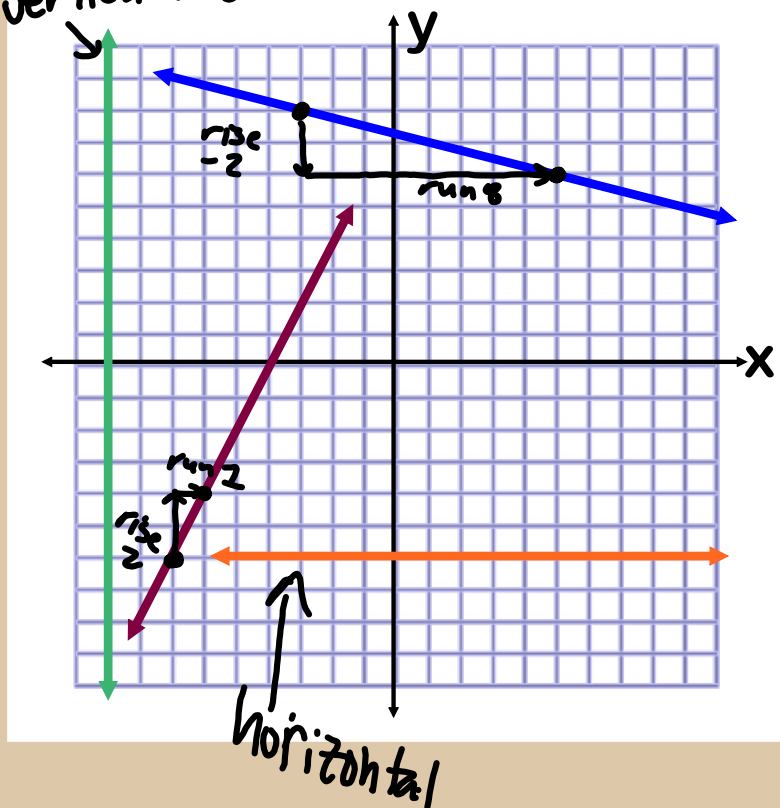
$$\text{Slope} = \frac{-1}{2}$$



$$\text{Slope} = \frac{2}{5}$$

## 7. Find the slopes of each line.

vertical line



blue line

$$\frac{-2}{8} = \frac{-1}{4}$$

green line

no slope/  
undefined

maroon

line

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

orange line

0

The slope  $m$  of a line that passes through the points  $(x_1, y_1)$  and  $(x_2, y_2)$  is

$$m = \frac{\text{rise}}{\text{run}} = \frac{\text{change in } y}{\text{change in } x} = \frac{y_2 - y_1}{x_2 - x_1}$$

8. Find the slope of the line that passes through the points  $(1,0)$  and  $(3,4)$ .

$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{4 - 0}{3 - 1} = \frac{4}{2} = \boxed{2}$$

9. Find the slope of the line that passes through the points  $(3,5)$  and  $(1,4)$ .

$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{4 - 5}{1 - 3} = \frac{-1}{-2} = \boxed{\frac{1}{2}}$$

10. Find the slope of the line that passes through the points  $(2,0)$  and  $(4,3)$ .

$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{3 - 0}{4 - 2} = \boxed{\frac{3}{2}}$$

11. Find the slope of the line that passes through the points  $(0,3)$  and  $(6,1)$ .

$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{1 - 3}{6 - 0} = \frac{-2 \div 2}{6 \div 2} = \boxed{\frac{-1}{3}}$$

12. Find the slope of the line that passes through the points  $(-2,1)$  and  $(1,-3)$ .

$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{-3 - 1}{1 - (-2)} = \boxed{\frac{-4}{3}}$$

13. Find the slope of the line that passes through the points  $(1,2)$  and  $(5,2)$ . (horizontal)

$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{2 - 2}{5 - 1} = \frac{0}{4} = \boxed{0}$$

14. Find the slope of the line that passes through the points  $(5,-1)$  and  $(5,3)$ .

$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{3 - (-1)}{5 - 5} = \frac{4}{0} = \boxed{\text{NO SLOPE}}$$

or undefined