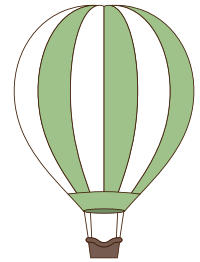# SLOPE REVIEW

Remember that the slope of a line is a number that describes the steepness of the line. You can find the slope of a line when you have an equation in slope–intercept form:

$$y = mx + b$$

↑ slope

You can also find the slope of a line by calculating the rise over the run, or the change in y over the change in x:

$$\text{slope} = \frac{\text{rise}}{\text{run}} = \frac{y_2 - y_1}{x_2 - x_1}$$

Practice! Find the slope of each line represented by the equation.

1 $y = \frac{2}{3}x + 7$

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

2 $y = -5x + 9$

Slope = ____-5____

3 $y = \frac{3}{5}x - 1$

Slope = ____$\frac{3}{5}$____

4 $y = -\frac{1}{4}x$

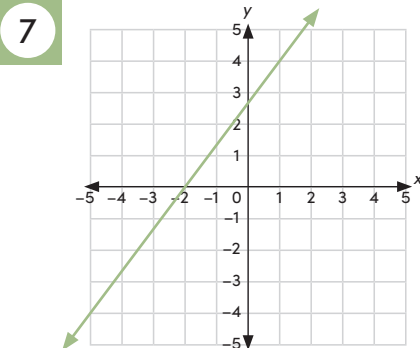Slope = ____$-\frac{1}{4}$____

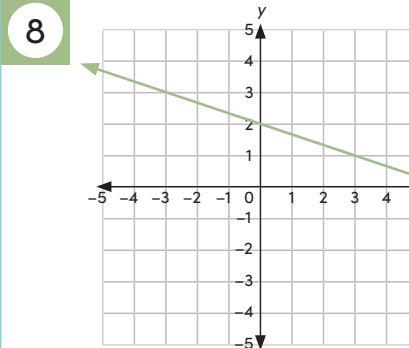**5** $y = 6 + 8x$

Slope = ____8____
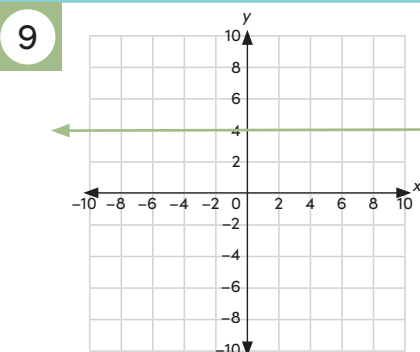
6 $y = 2$

Slope = ____0____

Try it! Find the slope of each line. Simplify your answer and write it as a proper fraction, improper fraction, or integer.
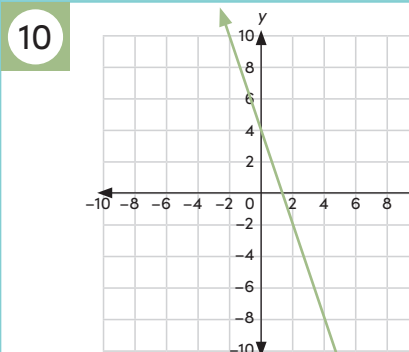
7

Slope = ____$\frac{4}{3}$____

8

Slope = ____$-\frac{1}{3}$____

9

Slope = ____0____

10

Slope = ____-3____

SLOPE REVIEW

Keep going! Find the slope of the line that passes through each set of points. Simplify your answer and write it as a proper fraction, improper fraction, or integer.

11 (2, 5) and (7, 8)	**12** (4, 1) and (5, 3)	**13** (1, 8) and (3, 8)
Slope = $\dfrac{3}{5}$	Slope = 2	Slope = 0
14 (4, 5) and (2, −9)	**15** (−5, 7) and (−1, 12)	**16** (−1, 7) and (3, −5)
Slope = 7	Slope = $\dfrac{5}{4}$	Slope = −3
17 (−4, 9) and (2, 1)	**18** (−6, −3) and (−4, 2)	**19** (−10, −4) and (−6, −8)
Slope = $-\dfrac{4}{3}$	Slope = $\dfrac{5}{2}$	Slope = −1

Challenge! Follow the directions to write equations and draw lines with the given slopes. **Equations and lines may vary.**
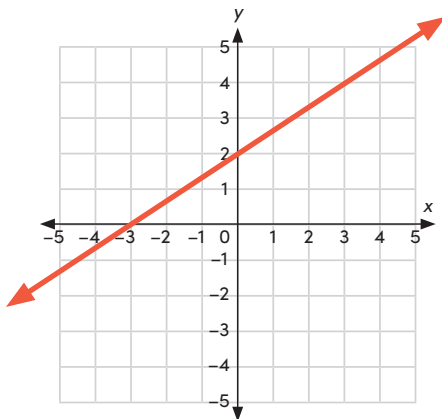
20 Write an equation with a slope of 4.

$$y = 4x - 3$$

21 Write an equation with a slope of $-\dfrac{2}{5}$.

$$y = -\dfrac{2}{5}x - 8$$

22 Draw a line with a slope of $\dfrac{2}{3}$.

23 Draw a line with a slope of −2.