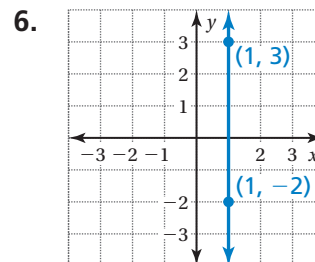
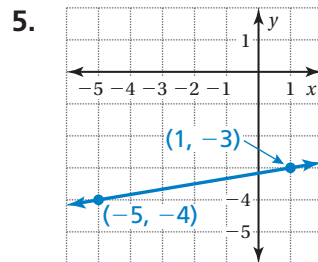
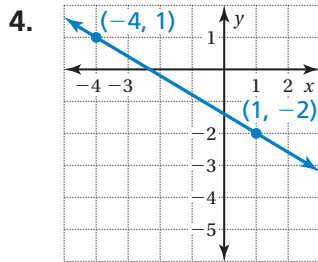
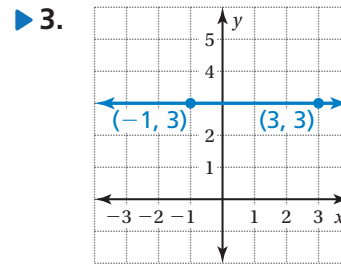
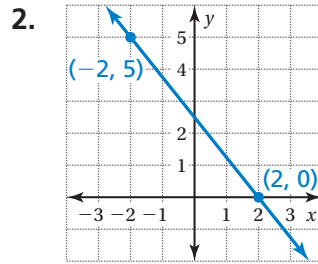
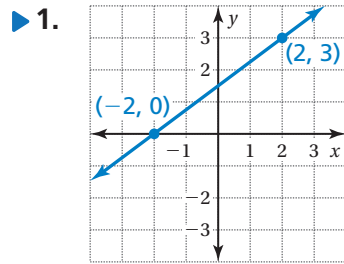


3.2

Practice

with **Calc Chat** and **Calc View**

Find the slope of the line. (See Examples 1 and 2.)



Find the slope of the line through the given points.

7. $(4, -1), (-2, -1)$

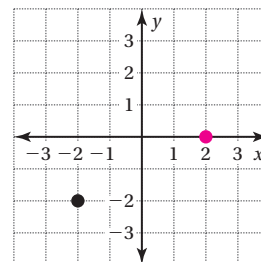
8. $(-7, 0), (-7, -6)$

9. $(10, 4), (4, 15)$

10. **YOU BE THE TEACHER** Your friend finds the slope of the line shown. Is your friend correct? Explain your reasoning.

$$m = \frac{3 - 1}{4 - 2} = \frac{2}{2} = 1$$

▶ 11. **OPEN-ENDED** Draw a line through each point so that the lines intersect at one point. Then find the slope of each line.



The points in the table lie on a line. Find the slope of the line.

12.

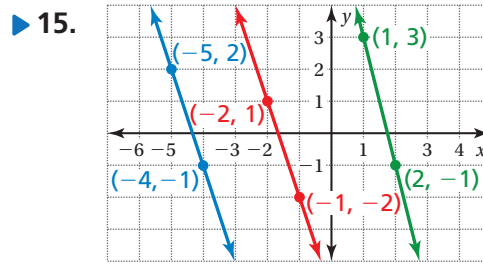
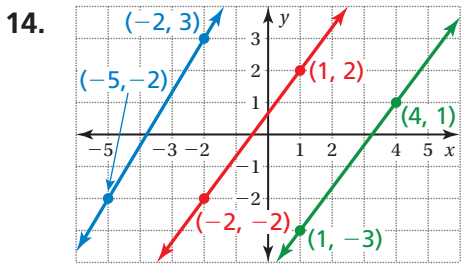
x	1	3	5	7
y	2	10	18	26

13.

x	-3	2	7	12
y	0	2	4	6



Which lines are parallel? How do you know? (See Example 3.)



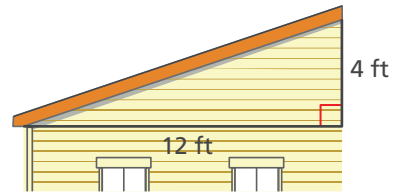
Are the given lines parallel? Explain your reasoning.

16. $y = -5, y = 3$

17. $y = 0, x = 0$

18. $x = -4, x = 1$

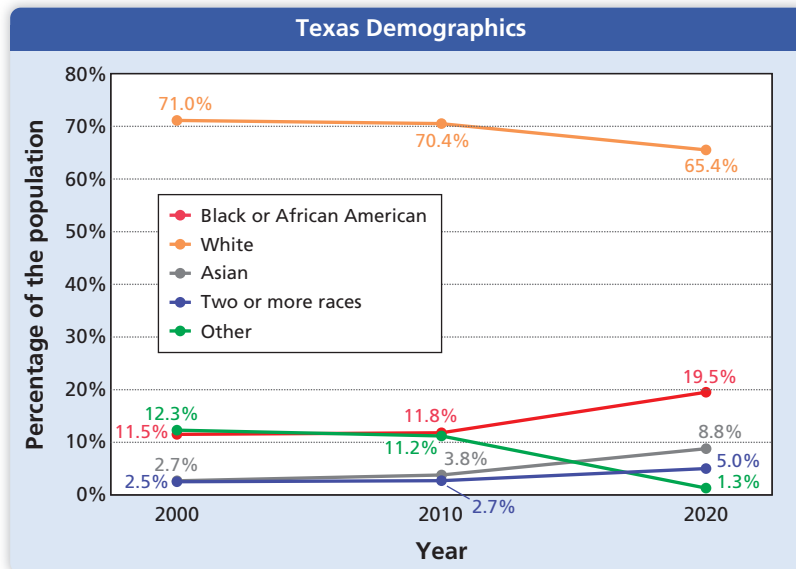
19. Carpenters refer to the slope of a roof as the *pitch* of the roof. Find the pitch of the roof.



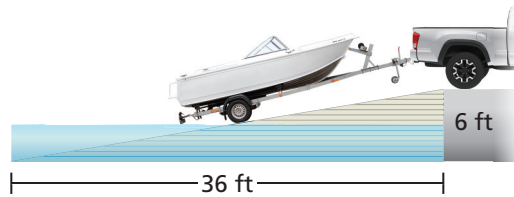
20. **PROJECT** The guidelines for a wheelchair ramp suggest that the ratio of the rise to the run be no greater than 1 : 12.

- Find a wheelchair ramp in your school or neighborhood. Does the slope of the ramp follow the guidelines?
- Design a wheelchair ramp that provides access to a building with a front door that is 2.5 feet above the sidewalk. Illustrate your design.

X1. CONNECTING TO DATA The graph shows changes in the demographics of Texas over time. Find and interpret the slope of the line segment for the percentage of the population that is Black or African American from 2010 to 2020. (See Example 4.)



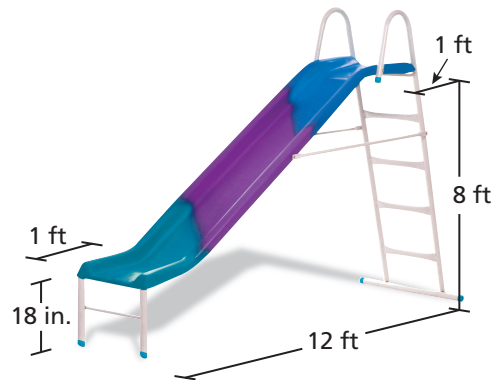
22. Which is steeper: the boat ramp, or a road with a 12% grade? (*Note:* Road grade is the vertical increase divided by the horizontal distance.)



23. **CONNECTING TO REAL LIFE** You own a small business that earned a profit of \$6,500 in January and \$17,500 in May. What was the rate of change in your profit for this time period?

24. **OPEN-ENDED** Choose two points in the coordinate plane. Use the slope formula to find the slope of the line that passes through the two points.

25. The top and the bottom of the slide are level with the ground. Find the slope of the middle portion of the slide.



Review & Refresh

Graph the linear equation.

26. $x = -3$ 27. $y = \frac{3}{2}x - \frac{1}{2}$

30. The figure shown is rotated 90° clockwise about vertex C , then translated 2 units left. What are the coordinates of the image?

Find the missing values in the ratio table.

28.

Yards	1		5	7
Feet	3	10		

29.

Miles	0.6		1.8	
Hours	1	2		4

