NAME _____

DATE _____

Module 8   Writing Linear Equations of
Two Variables
Lesson 1   Finding Slope

independent practice

Find the slope of the line passing through the given points.

1. (6, –4) and (1, 2)

_____

2. (5, –6) and (2, 5)

_____

3. (1, 1) and (2, –4)

_____

4. (–5, –2) and (–1, –9)

_____

5. (–1, 0) and (0, 7)

_____

6. (4, 0) and (7, –2)

_____

7. (–1, –2) and (3, –2)

_____

8. (4, –4) and (8, 9)

_____

9. (–2, –2) and (1, 10)

_____

10. (–7, 2) and (6, –1)

_____

11. (5, –3) and (5, 0)

_____

12. (–6, 8) and (–2, 2)

_____

Find the slope of a line:

13. parallel to the line through (3, –3) and (1, –2).

_____

14. perpendicular to the line through (4, –1) and (6, –5).

_____

15. perpendicular to the line through (5, –4) and (4, 2).

_____

16. parallel to the line through (1, 6) and (3, 4).

_____

17. parallel to the line through (–2, 3) and (–7, 5).

_____

18. perpendicular to the line through (0, –3) and (4, 3).

_____

19. parallel to the line through (2, –7) and (–1, 6).

_____

20. perpendicular to the line through (–3, 2) and (7, –2).

_____

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Journal

1. A student says the slope of a line passing through the points (–2, 5) and (4, 7) is equal to the ratio $\frac{7-5}{4-2}$. Is this correct? Justify your answer.

2. What are some meanings of the word slope?

3. Suppose a line with a slope of 9 indicates the relationship between the altitude (in feet) and the time (in seconds) for an airplane. Explain what this could mean.

4. There is a road sign on a hill picturing a truck sitting on top of a triangle. Below this sign, another sign says, "8% grade next 2 miles." Explain how an 8% grade of a hill is related to the slope of a line.

5. Compare a line with a slope of 5 and a line with a slope of $\frac{1}{5}$. Explain how they are alike and how they are different. Which is steeper?

Cumulative Review

Solve for *y*.

1. $2x + 4y > 2y + 6x$

2. $7y - 2x < 3y - 8 + 6x$

3. $5y \geq 3x + 6 - y + 4x + 3y$

4. $2y^2 \geq 18x^4$

5. $\frac{5}{2}y + \frac{1}{2}x < 10$

6. $-4y + x^2 \leq x + 4$

7. $y + 5 > 6x + 2$

8. $19x + 4y - 3x < 0$

9. $3 + 3x - 5y \geq 16$

10. $x + y + 5 \leq 4x - 3y + 2x + 2y + x + 3$