## Lesson 3.8 Warm Up

1. What is the slope of the line that goes through (0, 4) and (-2, -9)?

- 2. Graph y = 2/3x + 1
- 3. Write the equation of the vertical line that goes through the point (5, 10).

## Lesson 3.8 Slopes of // and Perpendicular Lines (Clickers)

You and a friend enjoy exercising together. One day, you are about to go running when your friend receives a phone call. You decide to start running and tell your friend to catch up after the call. The red line represents you and the blue line represents your friend. Will your friend catch up? Explain.



- \*Slopes of parallel lines are equal.
- \*Slopes of perpendicular lines are opposite reciprocals.
- Ex. What is the slope of the line that is parallel to y = 3x 7?
- Ex. What is the slope of the line that is perpendicular to y = 1/3x + 6?

- 1 What is the slope of a line perpendicular to
  - y = 3x 9?

- 2 What is the slope of the line that is parallel to
  - y 5 = 9(x 7)?

- 3 The lines y = 5x 7 and y = 5x + 12 are:
  - A parallel
  - B perpendicular
  - C neither

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## 4 The lines y = 9 and x = 12 are:

- A parallel
- B perpendicular
- C neither

Ex. Write the equation of the line that is parallel to y = 2x - 9 and goes through the point (5, -1).

Ex. Write the equation of the line that is perpendicular to y - 9 = -1/3(x - 7) and goes through the point (-9, -3).

5 Write the equation of the line parallel to y = 2x + 5 that goes through the point (4, 10).

Ex. Put the equation in slope-intercept form. Then decide if the lines are parallel, perpendicular, or neither.

a. y = 3x -12	b. y - 4 = 1/2 (x - 4)
2x + y = 8	y = -2x + 3

