Determine whether the lines through the pairs of points are parallel, perpendicular, or neither.

1) (2, 5) and (-2, 7); (0, 4) and (1, 6)
   Objective: (3.4) Compare the Slopes of Parallel and Perpendicular Lines

2) (1, 2) and (5, 4); (0, 3) and (2, 4)
   Objective: (3.4) Compare the Slopes of Parallel and Perpendicular Lines

Find the slopes of the lines that are (a) parallel to and (b) perpendicular to the line passing through the pair of points.

3) (1, -1) and (-2, 8)
   Objective: (3.4) Compare the Slopes of Parallel and Perpendicular Lines

Determine whether the lines through the pairs of points are parallel, perpendicular, or neither.

4) (0, -5) and (2, -4); (-1, -5) and (1, -6)
   Objective: (3.4) Compare the Slopes of Parallel and Perpendicular Lines

Find the slope of the line if it exists.

5) 
   Objective: (3.4) Find the Slope of a Line Given Two Points of the Line
Find the slope of the line that goes through the given points.

6) (-7, -12) and (-6, 11)
   Objective: (3.4) Find the Slope of a Line Given Two Points of the Line

7) (9, 0), (0, -7)
   Objective: (3.4) Find the Slope of a Line Given Two Points of the Line

8) (2, -1) and (-7, -4)
   Objective: (3.4) Find the Slope of a Line Given Two Points of the Line

Find the slope of the line if it exists.

9) [Diagram]
   Objective: (3.4) Find the Slope of a Line Given Two Points of the Line
Find the slope of the line that goes through the given points.
10) (2, 5) and (4, 2)

Objective: (3.4) Find the Slope of a Line Given Two Points of the Line

Find the slope of the line.
11) \( x = 2 \)

Objective: (3.4) Find the Slopes of Horizontal and Vertical Lines

12) \( y = 3 \)

Objective: (3.4) Find the Slopes of Horizontal and Vertical Lines

13)

Objective: (3.4) Find the Slopes of Horizontal and Vertical Lines

Solve.
14) An inclined walkway leading to a new building is to rise 6 inches for each horizontal distance of 10 feet. Write this slope as a grade. (Round to the nearest tenth of a percent if necessary.)

Objective: (3.4) Solve Applications of Slope
15) The approach ramp used by a daredevil motorcyclist for flying over a collection of flaming barrels of oil has a rise of 45 feet for every 90 feet in horizontal distance. Find the grade of the ramp. Round to the nearest whole percent.
   Objective: (3.4) Solve Applications of Slope

16) The pitch of a roof is its slope. Find the pitch of the roof shown.

![Diagram of a roof showing pitch]

Objective: (3.4) Solve Applications of Slope

Find the slope of the line and write the slope as a rate of change. Don't forget to attach the proper units.

17) The graph shows the total cost \( y \) (in dollars) of owning and operating a mini-van where \( x \) is the number of miles driven.

![Graph showing total cost vs. miles driven]

Objective: (3.4) Solve Applications of Slope
Determine whether the lines through the pairs of points are parallel, perpendicular, or neither.

18) \[3x - 8y = -16\]
\[32x + 12y = -18\]

Objective: (3.5) Use the Slope-Intercept Form to Determine Whether Two Lines are Parallel, Perpendicular, or Neither

19) \[9x + 3y = 12\]
\[27x + 9y = 40\]

Objective: (3.5) Use the Slope-Intercept Form to Determine Whether Two Lines are Parallel, Perpendicular, or Neither

20) \[3x - 4y = 19\]
\[8x + 6y = 12\]

Objective: (3.5) Use the Slope-Intercept Form to Determine Whether Two Lines are Parallel, Perpendicular, or Neither
Match the linear equation with its graph.

21) \( y = 2x - 3 \)

**A)**

Determine the slope and the y-intercept of the graph of the equation.

22) \( 5x - 2y = 10 \)

**Objective:** (3.5) Use the Slope-Intercept Form to Find the Slope and the y-Intercept of a Line

23) \( 6x + y = -11 \)

**Objective:** (3.5) Use the Slope-Intercept Form to Find the Slope and the y-Intercept of a Line
24) \(-x + 3y = 30\)  
Objective: (3.5) Use the Slope-Intercept Form to Find the Slope and the \(y\)-Intercept of a Line

25) \(x + 11y = 1\)  
Objective: (3.5) Use the Slope-Intercept Form to Find the Slope and the \(y\)-Intercept of a Line

Use the slope-intercept form to graph the equation.

26) \(y = -\frac{3}{5}x\)  
Objective: (3.5) Use the Slope-Intercept Form to Graph a Linear Equation

27) \(y = \frac{1}{3}x + 2\)  
Objective: (3.5) Use the Slope-Intercept Form to Graph a Linear Equation