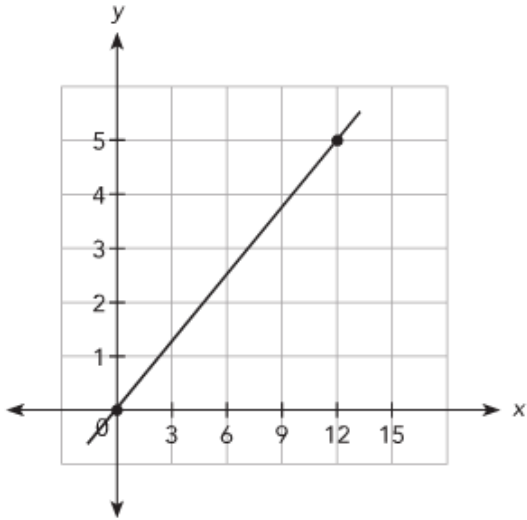


Review for Test #3 - Lines and Linear Equations

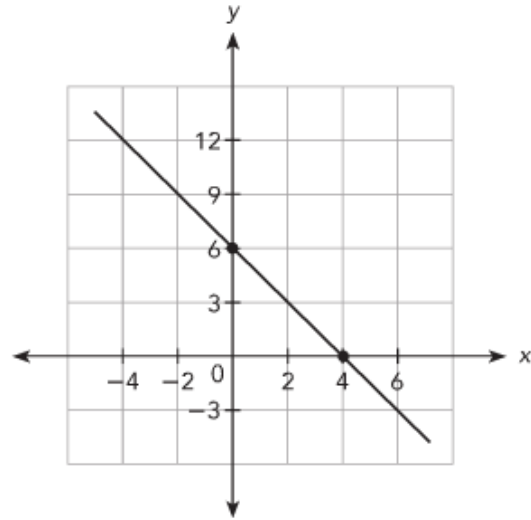
Name: _____ Class: _____

Find the slope of each line using the points indicated. Then write an equation for it.

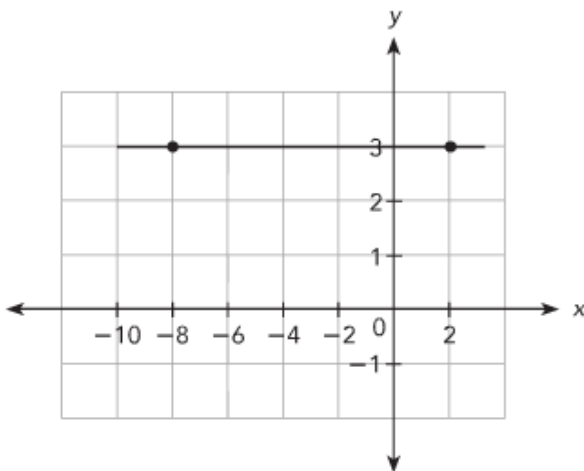
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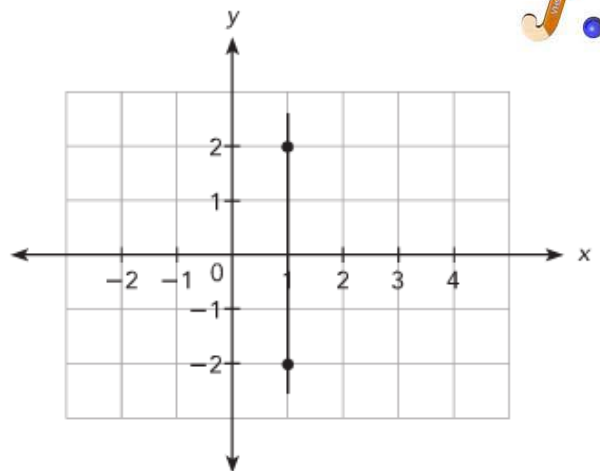
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3



4



5 – 7. Find the slope of the line containing the two indicated points.

5.) (-4,3) and (-6,2)

6.) (4,7) and (0,-8)

7.) (3,6) and (3,-6)

8 – 10. Find the quadrant in which these points are located.

8.) (2,-7)

9.) (4,4)

10.) (-7,2)

11 – 13. Write the following in $y = mx + b$ form.

11.) $-3y = 2x - 9$

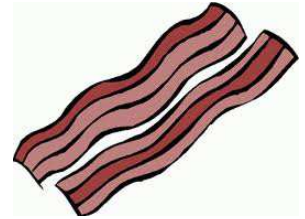
12.) $-3x = 2y + 10$

13.) $x - y = 4$

14 – 15. Given the following line and a point on that line. Solve for k .

14.) $y = -\frac{1}{2}x + 5$ and $(k, 3)$

15.) $y = -\frac{1}{2}x + 5$ and $(-4, k)$



16 – 17. Given the following slope and a point on the line. Write the equation of the line.

16.) $m = -3$ containing $(2, 3)$

17.) $m = \frac{2}{3}$ containing $(-3, -3)$

18 – 21. Solve. Show your work. Graph each line.

18.) Write an equation of the line parallel to $5y = 3x + 12$ that has a y-intercept of 2.

19.) Write an equation of the line that slope $-\frac{1}{2}$ and passes through the point $(-4, 5)$.

20.) Write an equation of the line that passes through the point $(-4, -4)$ and is parallel to $2y - x = -6$.

21.) Write an equation of the line that passes through the point $(-4,-3)$ and is parallel to $4y - x = -16$.

22 – 24. Write an equation of the line that passes through each pair of points. Graph each line.

22.) $(3,5)$ and $(3,-8)$

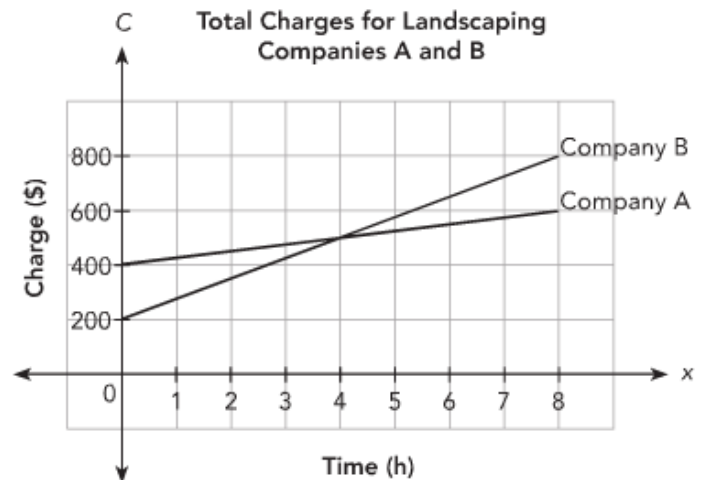
23.) $(1,2)$ and $(4,8)$



24.) $(4,4)$ and $(-2,1)$

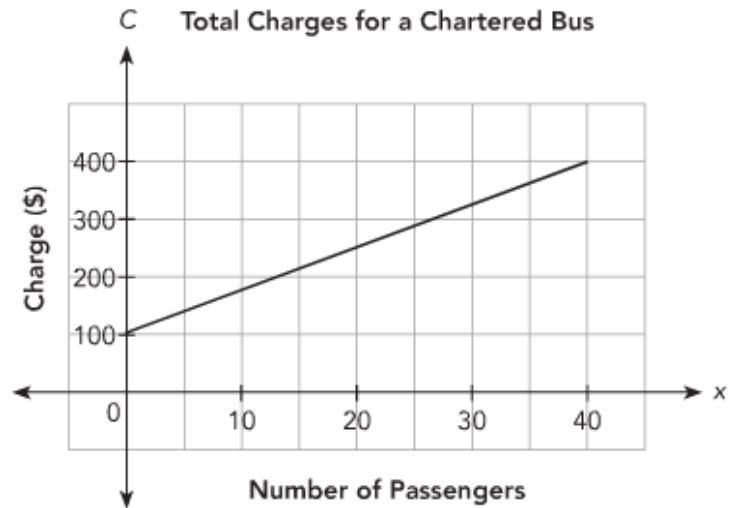
25.) Landscaping Company A and Company B each charges a certain amount, C dollars, as consultation fee, plus a fixed hourly charge.

- a) Find the amount each landscaping company charges as its consultation fee.
- b) Explain how you know.
Which company charges a greater amount per hour?
Explain your answer.



26.) The operator of a charter bus service charges a certain amount for a bus, plus per-passenger charge. The graph shows the total charges, C dollars, for carrying x passengers.

- a) Find the vertical intercept and explain what information it gives about the situation.
- b) Find the slope of the graph and explain what information it gives about the situation.



27.) Which equation represents the equation of a line that is parallel to the line $4y + x = 28$?

- (A) $8y = -2x + 56$
- (B) $24 - 8y = 2x$
- (C) $4x - y = 12$
- (D) $y = 4x + 2$



Answers

- 1.) $\frac{5}{12}; y = \frac{5}{12}x$
- 2.) $-\frac{3}{2}; y = -\frac{3}{2}x + 6$
- 3.) $0; y = 3$
- 4.) undefined; $x = 1$
- 5.) $\frac{1}{2}$
- 6.) $\frac{15}{4}$
- 7.) undefined
- 8.) IV
- 9.) I
- 10.) II
- 11.) $y = -\frac{2}{3}x + 3$
- 12.) $y = -\frac{3}{2}x - 5$
- 13.) $y = x - 4$
- 14.) 4
- 15.) 7
- 16.) $y = -3x + 9$
- 17.) $y = \frac{2}{3}x - 1$
- 18.) $y = \frac{3}{5}x + 2$
- 19.) $y = -\frac{1}{2}x + 3$
- 20.) $y = \frac{1}{2}x - 2$
- 21.) $y = \frac{1}{4}x - 2$
- 22.) $x = 3$
- 23.) $y = 2x$
- 24.) $y = \frac{1}{2}x + 2$
- 25.) a.) Landscaping Company A: \$400
b.) Company B (has a steeper slope)
- Landscaping Company B: \$200; They're the y-intercepts.
- 26.) a.) \$100; initial charge for bus
b.) \$7.50 per passenger (Charge per passenger)
- 27.) B