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Math 10 Chapter 6 Test

Part I Multiple Choice: Please answer the following questions on the scantron provided. **[20 marks]**

____ 1. Determine the slope of the line that passes through G(3, –4) and H(–4, 10).

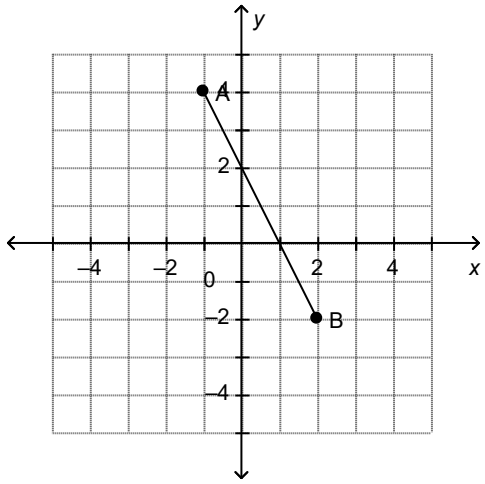
a. 2

b. $-\frac{1}{2}$

c. $\frac{1}{2}$

d. –2

____ 2. Determine the slope of this line segment.



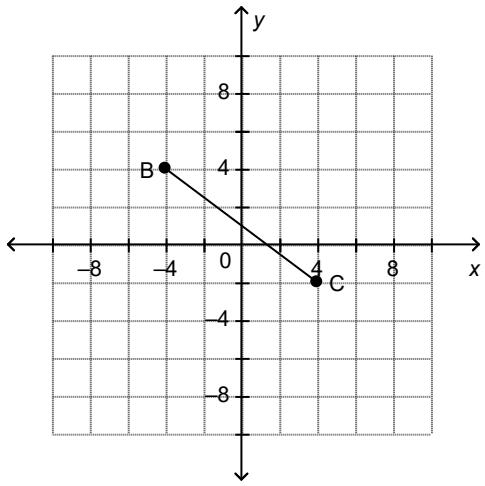
a. $-\frac{1}{2}$

b. –2

c. $\frac{1}{2}$

d. 2

____ 3. Is the slope of this line segment positive, negative, zero, or not defined?



a. negative

b. not defined

c. positive

d. zero

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____ 4. Determine the slope of a line that is parallel to the line through L(–6, 1) and K(3, –9).

a. $\frac{10}{9}$

b. $\frac{9}{10}$

c. $-\frac{10}{9}$

d. $-\frac{9}{10}$

____ 5. The slope of a line is $\frac{5}{14}$. What is the slope of a line that is perpendicular to this line?

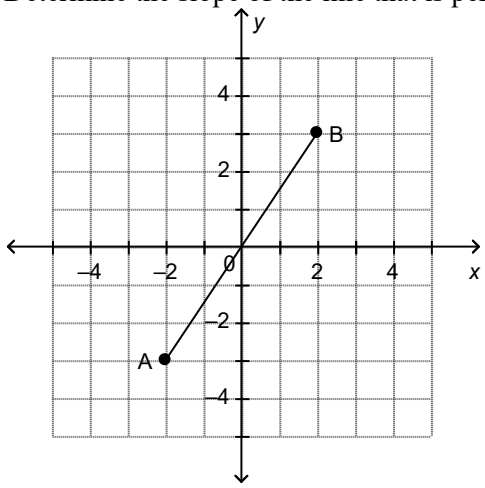
a. $-\frac{14}{5}$

b. $-\frac{5}{14}$

c. $\frac{14}{5}$

d. $\frac{28}{10}$

____ 6. Determine the slope of the line that is perpendicular to this line segment.



a. $\frac{3}{2}$

b. $-\frac{3}{2}$

c. $\frac{2}{3}$

d. $-\frac{2}{3}$

____ 7. A road rises 10 m for every 56 m measured horizontally. Determine the slope of the road.

a. $-\frac{28}{5}$

b. $-\frac{5}{28}$

c. $\frac{28}{5}$

d. $\frac{5}{28}$

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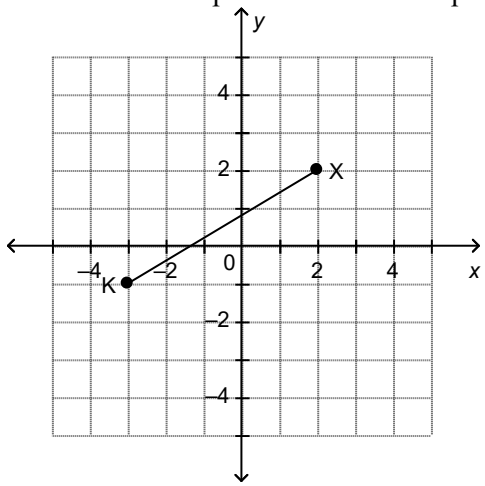
____ 8. Determine the slope of the line that is parallel to this line segment.



a. $-\frac{3}{5}$

b. $\frac{5}{3}$

c. $\frac{3}{5}$

d. $-\frac{5}{3}$

____ 9. Write an equation for the graph of a linear function that has slope $-\frac{5}{3}$ and y-intercept –2.

a. $y = -2x -$

b. $y = -\frac{5}{3}x -$

c. $y = \frac{5}{3}x +$

d. $y = 2x -$

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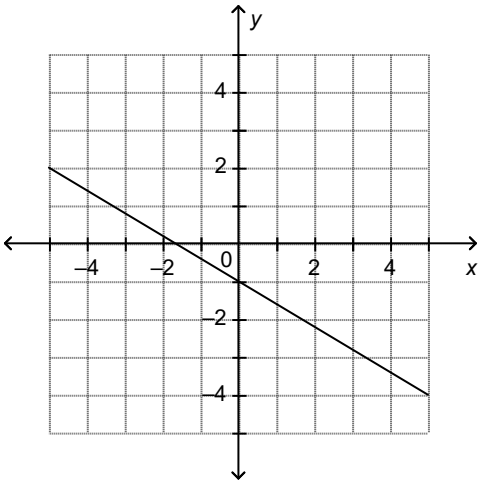
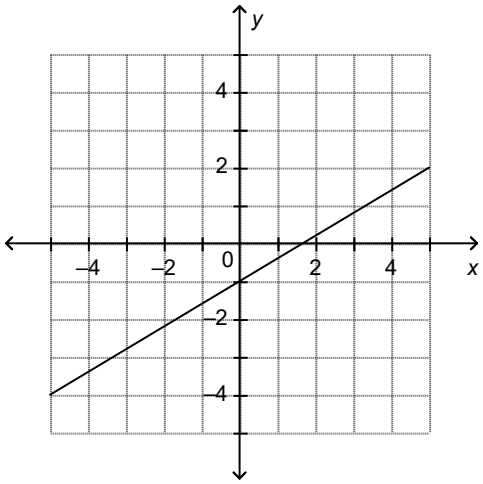
____ 10. Which graph represents the equation $y = -\frac{3}{5}x + 4$?

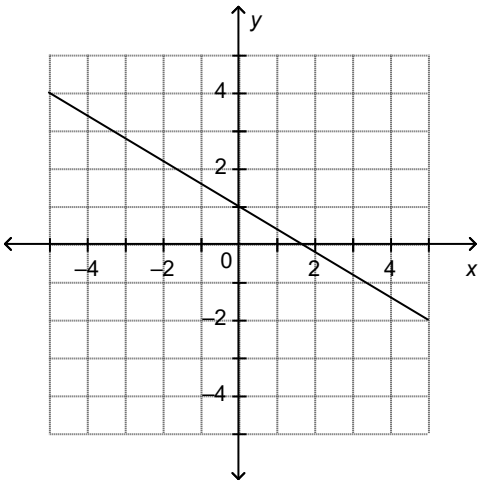
a.



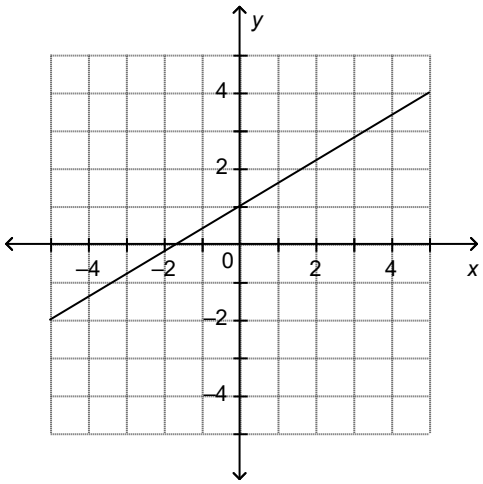
c.



b.



d.



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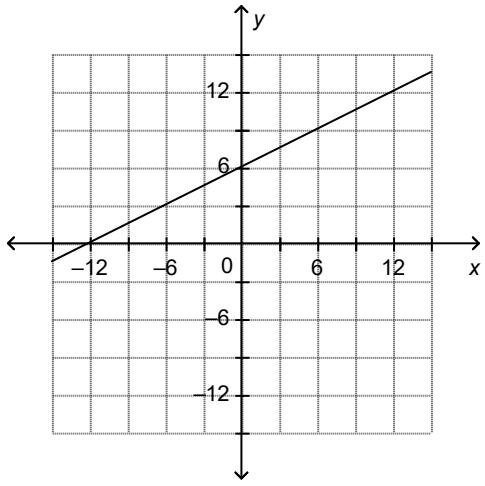
____ 11. Write an equation to describe this graph.



a. $f(x) = -\frac{1}{7}x$

b. $f(x) = \frac{1}{7}x -$

c. $f(x) = -\frac{1}{7}x$

d. $f(x) = \frac{1}{7}x -$

____ 12. Use the equation $y = -\frac{7}{7}x -$ to calculate the value of y when $x = 6$.

a. –46
b. –17
c. 17
d. –25

____ 13. Write an equation for the graph of a linear function that has slope 7 and passes through R(5, −7).

a. $y + 7 = -7(x - 5)$
b. $y + 7 = 7(x - 5)$
c. $y + 7 = \frac{1}{7}(x -$
d. $y - 7 = 7(x + 5)$

____ 14. Which equations represent perpendicular lines?

a. $y = 8x - 2,\ y = 8x + 2$

b. $y = -2x + 12,\ y = \frac{1}{7}x +$

c. $y = 12x - 2,\ y = 12x +$

d. $y = \frac{1}{8}x +,\ y = 8x + 8$

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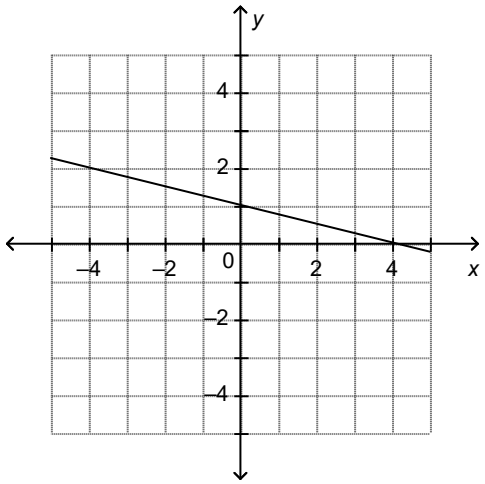
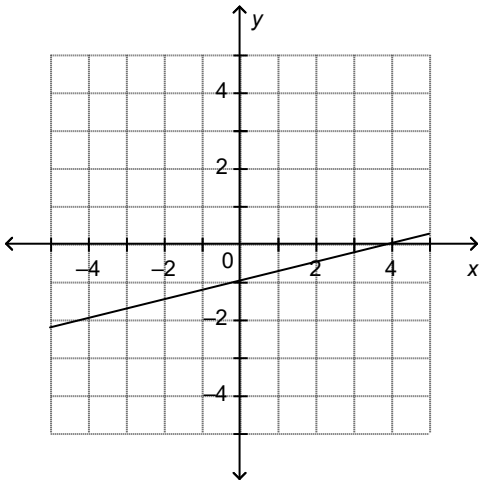
____ 15. Which graph represents the equation $y + 2 = \frac{1}{4}(x +$?

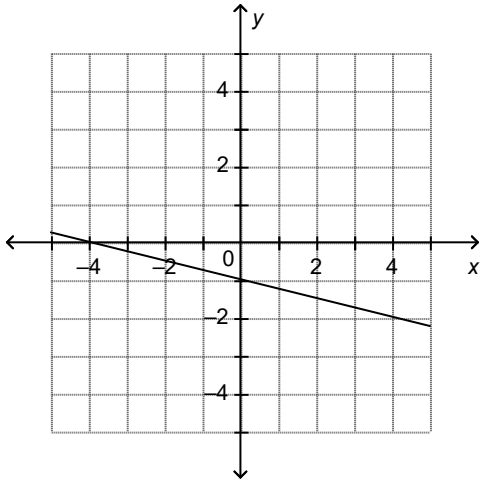
a.



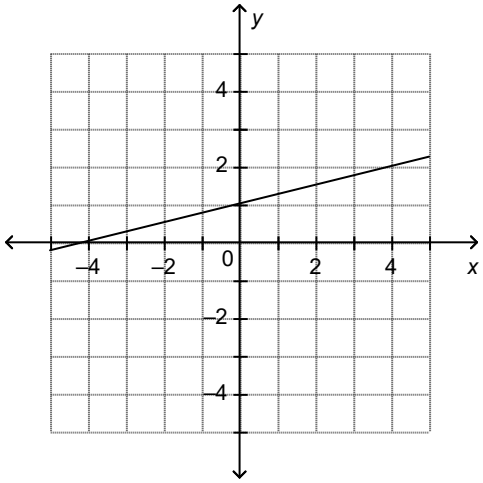
c.



b.



d.



____ 16. Write this equation in slope-intercept form: $y - 3 = -\frac{2}{5}(x -$

a. $y = -\frac{2}{5}x\ \frac{11}{5}$

b. $y = -\frac{3}{5}x\ \frac{11}{5}$

c. $y = -x + \frac{11}{5}$

d. $y = \frac{2}{5}x\ \frac{11}{5}$

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____ 17. Write an equation for the line that passes through U(6, –4) and is perpendicular to the line $y = \frac{1}{7}x -$

a. $y + 4 = -\frac{1}{7}(x -$

b. $y - 4 = 7(x + 6)$

c. $y + 4 = -7(x - 6)$

d. $y + 4 = 7(x - 6)$

____ 18. Write this equation in general form: $y + 4 = \frac{5}{3}(x -$

a. $5x - 3y = -7$

b. $5x - 3y - 7 = 0$

c. $5x - 3y - 27 = 0$

d. $5x + 3y - 27 = 0$

____ 19. Determine the *x*-intercept and the *y*-intercept for the graph of this equation: $2x - 6y + 12 = 0$

a. *x*-intercept: 6; *y*-intercept: 2

b. *x*-intercept: -6; *y*-intercept: -2

c. *x*-intercept: 6; *y*-intercept: -2

d. *x*-intercept: -6; *y*-intercept: 2

____ 20. Determine the slope of the line with this equation: $16x - 4y + 2 = 0$

a. –4

b. $\frac{1}{4}$

c. $-\frac{1}{4}$

d. 4

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Part II Short Answer Section

Remember to show all your work!!! **[9 marks]**

1. An equation of a line is $y = mx + 2$. Determine the value of m when the line passes through the point J(–3, 4). **(2 marks)**

2. Write an equation for the line that passes through B(–1, 3) and is: **(3 marks)**

   a) parallel to the line $y = -\frac{7}{3}x -$

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3. a) Determine the *x*- and *y*-intercepts of the graph of this equation: $5x + 8y + 40 = 0$
(2 marks)

4. Two lines have the following slopes. What is the value of ***k*** when the lines are perpendicular to each other?

, **(2 marks)**