Chapter 6 Test   PRACTICE TEST

/20 **Multiple Choice:** Choose the BEST answer. Record your answer on the line.
NO CALCULATOR ALLOWED FOR THE MULTIPLE CHOICE PORTION OF THIS TEST.

_____ 1. Determine the slope of the line that passes through G(4, –2) and H(–5, 10).

a. $\dfrac{3}{4}$

c, $\dfrac{4}{3}$

b. $-\dfrac{4}{3}$

d. $-\dfrac{3}{4}$

_____ 2. What is the slope of the line with an x-intercept of –4 and a y-intercept of –3?
(Hint: draw a sketch!)

a. $\dfrac{4}{3}$

c. $-\dfrac{4}{3}$

b. $\dfrac{3}{4}$

d. $-\dfrac{3}{4}$

_____ 3. What is the slope of the line passing through points (x, y) and (p, q)?

a. $\dfrac{p-x}{q-y}$

c. $\dfrac{x-y}{q-p}$

b. $\dfrac{q-y}{p-x}$

d. $\dfrac{q-p}{y-x}$

_____ 4. The slope of a line is $\dfrac{5}{17}$. What is the slope of a line that is **perpendicular** to this line?

a. $-\dfrac{17}{5}$

c. $\dfrac{17}{5}$

b. $-\dfrac{5}{17}$

d. $\dfrac{34}{10}$

_____ 5. In the equation of a line, $y = mx + b$, the y-intercept is represented by the letter
a. b

c. y

b. m

d. x

_____ 6. What is the y-intercept of the line $y = -\frac{4}{5}x$?

   a.   0   c.   1

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

_____ 7. Identify the pair of **perpendicular** lines.

   a. $y = \frac{2}{3}x + 1$ c. $y = \frac{1}{5}x + 2$

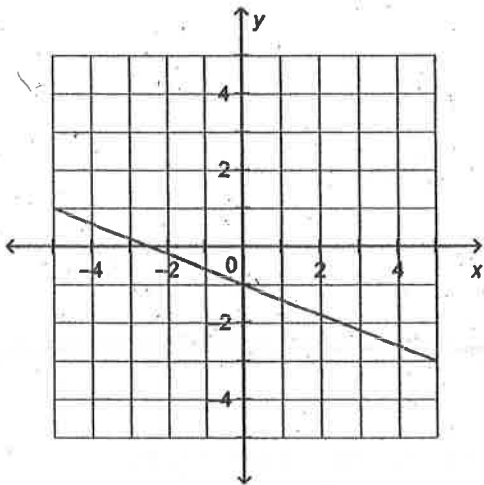 $y = -\frac{3}{2}x + 2$ $y = \frac{1}{5}x + 1$

   b. $y = \frac{2}{3}x + 1$ d. $y = \frac{1}{5}x + 2$

         $y = -\frac{2}{3}x + 2$ $y = 5x + 1$

_____ 8. Write an equation in $y = mx + b$ form to describe this graph.

   a. $y = -\frac{2}{5}x + 1$ c. $y = \frac{2}{5}x - 1$

   b. $y = \frac{2}{5}x + 1$ d. $y = -\frac{2}{5}x - 1$

_____ 9. Points M(1, 9) and N(−1, 1) are on a line with y-intercept of 2. What is the equation of the line?

   a. $y = 2x - 4$ c. $y = -4x + 2$
   b. $y = -2x + 4$ d. $y = 4x + 2$

____ 10. The equation of the line **passing through** the point (2, 3) with slope −2 is

a. $y = -2x + 3$
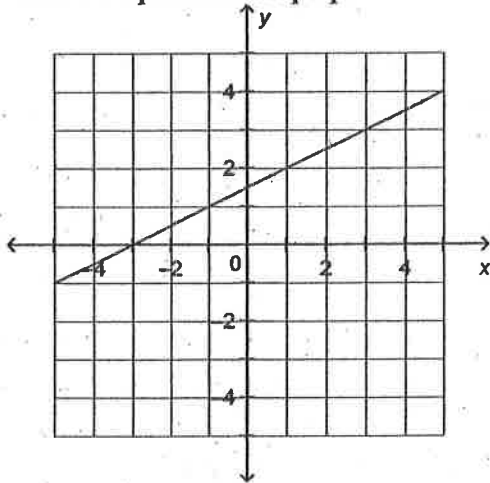b. $y = -2x + 7$

c. $y = -2x + 1$
d. $y = -2x - 1$

____ 11. Describe the graph of the linear function with this equation: $y - 9 = -2(x + 4)$

a. The graph is a line through (4, −9) with slope −2.
b. The graph is a line through (−4, 9) with slope −2.
c. The graph is a line through (4, −9) with slope 2.
d. The graph is a line through (−4, 9) with slope 2.

____ 12. Write an equation in slope-point form for this line.

a. $y - 3 = -\frac{1}{2}(x - 3)$

b. $y + 3 = -\frac{1}{2}(x + 3)$

c. $y - 3 = \frac{1}{2}(x - 3)$

d. $y + 3 = \frac{1}{2}(x + 3)$

____ 13. Write an equation in slope-point form for the line that passes through A(−5, 5) and B(−7, 8).

a. $y - 5 = -\frac{3}{2}(x + 5)$

b. $y - 8 = -\frac{3}{2}(x + 5)$

c. $y + 5 = -\frac{3}{2}(x - 5)$

d. $y + 8 = \frac{3}{2}(x - 5)$

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_____ 14. Rewrite the equation $y = -2x - 5$ in general form.

   a. $2x + y + 5 = 0$ c. $2x - y + 5 = 0$

   b. $-2x - y + 5 = 0$ d. $-2x - y - 5 = 0$

_____ 15. For the line $4x - 3y - 12 = 0$, which statement is true?

   a. The x-intercept is 4 and the y-intercept is 3.
   b. The x-intercept is 3 and the y-intercept is -4.
   c. The x-intercept is 3 and the y-intercept is 4.
   d. The x-intercept is 4 and the y-intercept is -3.

_____ 16. Determine the slope of the line with this equation: $6x + 2y + 5 = 0$

   a. $\dfrac{1}{3}$ c. -3

   b. $-\dfrac{1}{3}$ d. 3

_____ 17. Which of the following equations represents a line with slope $-\dfrac{1}{2}$ and y-intercept 2 ?

   a. $2x + 4y - 8 = 0$ c. $2x - 4y - 8 = 0$

   b. $2x - 4y + 8 = 0$ d. $2x + 4y + 8 = 0$

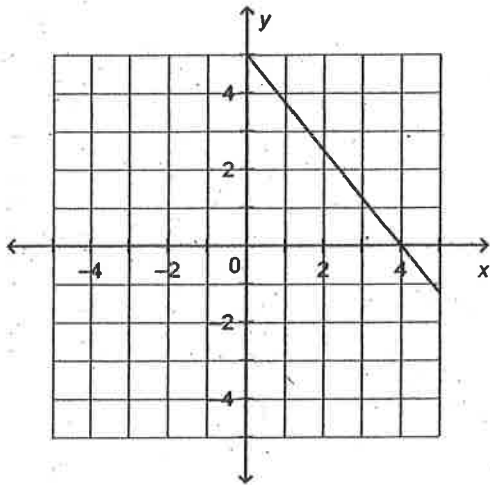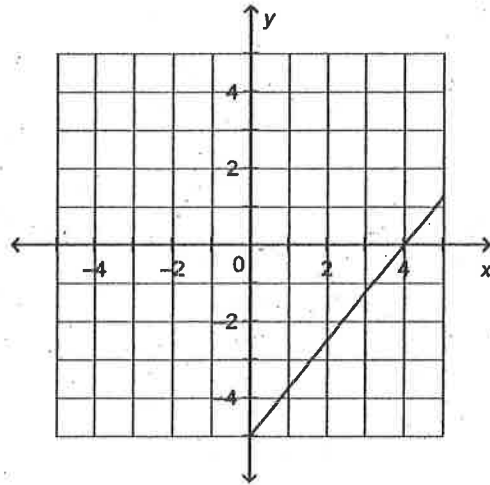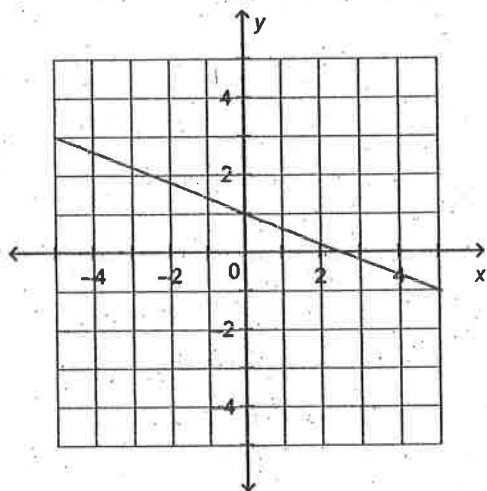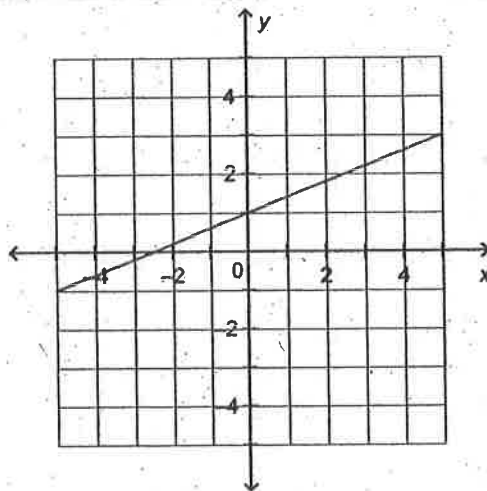____ 18. Which graph represents the equation $5x - 4y - 20 = 0$?

a.
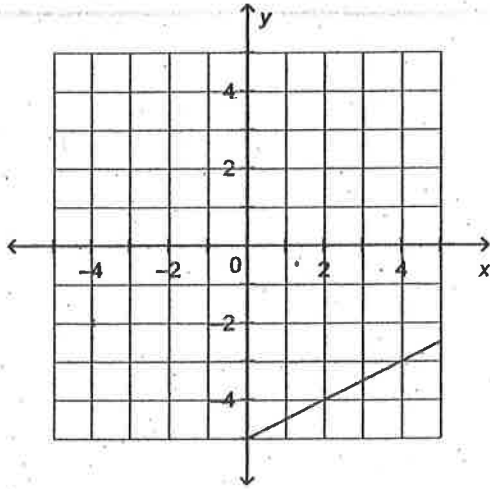
c.
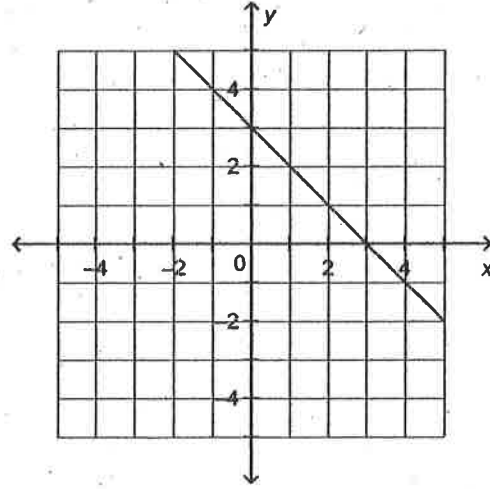
b.

d.

____ 19. Which **graph** represents the equation $y = -\frac{2}{5}x + 1$?
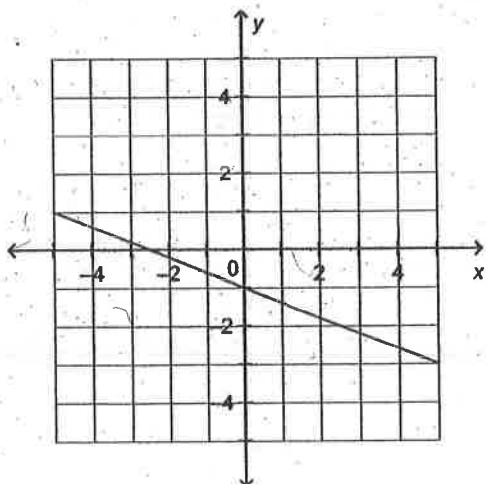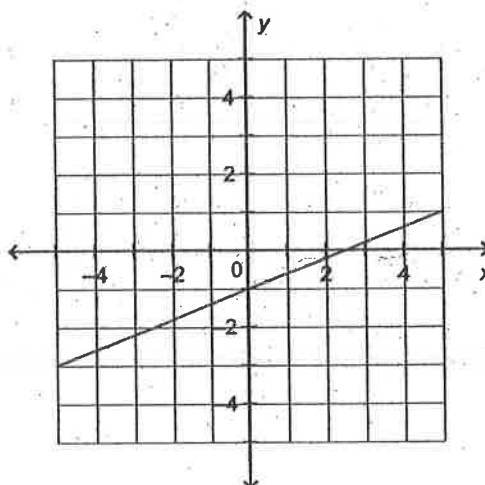
a.

c.

b.

d.

____ 20. What is the equation of the line that **passes through** $(3, -1)$ and is parallel to the line $y = 3x + 2$?
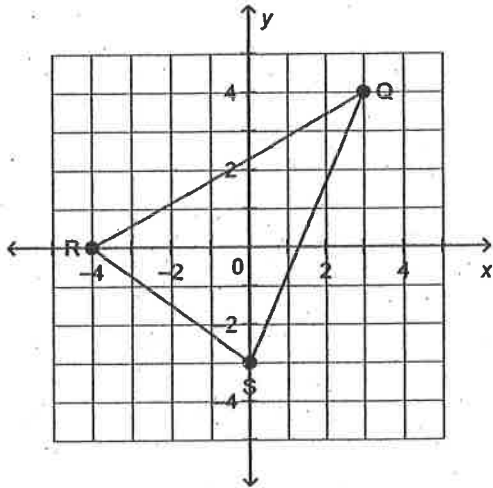
a. $y = 3x + 10$

b. $y = -\frac{x}{3} + 8$

c. $y = 3x - 10$

d. $y = -\frac{x}{3} - 10$

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Chapter 6 Test

⟋₂0 Written Response. SHOW ALL WORK. CALCULATOR PERMITTED.

21. Determine the slope of each line segment. (3 marks)

Slope of RQ: _____   Slope of SQ: _____   Slope of RS: _____

22. A line **passes through** R(10, 15) and K(−10, 25).

a) What is the slope of line RK? (2 marks)

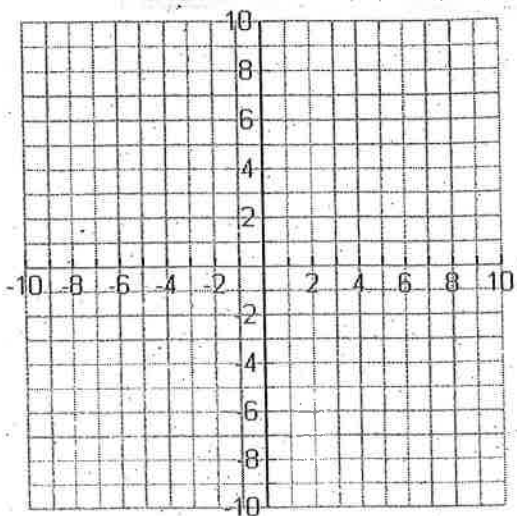b) Line VB is parallel to RK. What is the slope of VB? (1 mark)

c) Line WX is perpendicular to RK. What is the slope of WX? (1 mark)

23. Graph this equation $y = \dfrac{5}{4}x - 2$.   (2 marks)

24. An equation of a line is $y = mx + 2$. Determine the value of m when the line passes through the point J(–6, 3).
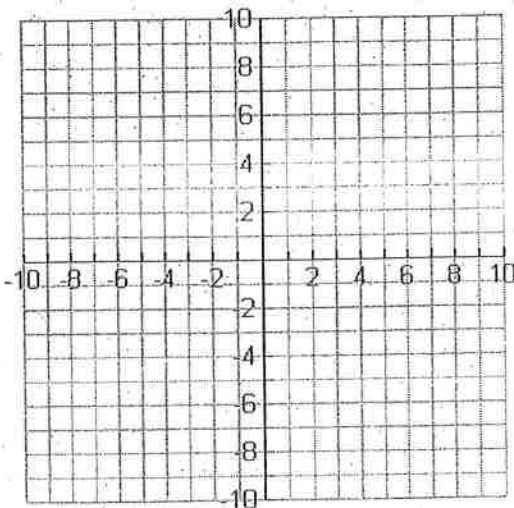   (2 marks)

Answer: _____

25. Francine runs a T-shirt company. For each order she receives, Francine charges a flat (initial) fee of $45, plus $12.95 per T-shirt.

    a) Write an equation for the total cost, C dollars, for ordering n T-shirts. (1 mark)

    b) Marnell ordered 46 T-shirts. What was the total cost? (1 mark)

    c) Jakub paid a total cost of $1378.85. How many T-shirts did he order? (1 mark)
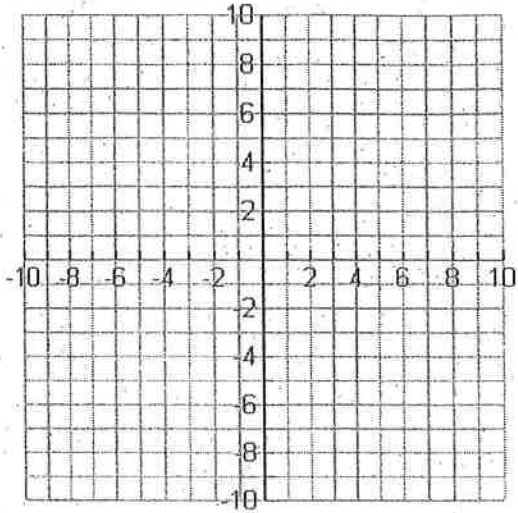
26. Graph this equation: $y + 2 = \dfrac{1}{2}(x - 3)$ (2 marks)

27. Graph this equation: $x - 5y - 10 = 0$ (2 marks)

28. Write this equation in **general** form: $y = \frac{7}{4}x - 7$ (2 marks)