

Math 1201
Chapter 6 SAMPLE TEST Answers

Part A: Multiple Choice Place the letter that corresponds to the correct answer in the space provided to the right. (10 marks)

1. Find the slope of the line that passes through the points A(2, -3) and B(-5, 7). 1. **B**

- a) $-\frac{12}{5}$ b) $-\frac{10}{7}$ c) $-\frac{7}{10}$ d) $-\frac{4}{7}$

2. What is the y-intercept of $x - 2y + 3 = 0$? 2. **D**

- a) -3 b) $-\frac{3}{2}$ c) $\frac{1}{2}$ d) $\frac{3}{2}$

3. What is the slope of the line $2x - 3y = 48$? 3. **B**

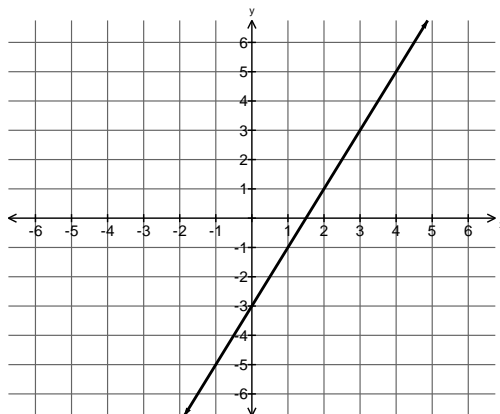
- a) $-\frac{2}{3}$ b) $\frac{2}{3}$ c) $-\frac{1}{2}$ d) $\frac{1}{2}$

4. Given: $2x + 4y = 11$, what is the x-intercept? 4. **A**

- a) $\frac{11}{2}$ b) $\frac{11}{4}$ c) $-\frac{11}{2}$ d) $-\frac{11}{4}$

5. What is the equation of the line given in the diagram? 5. **D**

- a) $y = \frac{1}{2}x + 3$
b) $y = \frac{1}{2}x - 3$
c) $y = 2x + 3$
d) $y = 2x - 3$



6. What is the equation of a line with undefined slope and passes through the point (0, -3)? 6. **A**

- a) $x = 0$ b) $x = -3$ c) $y = 0$ d) $y = -3$

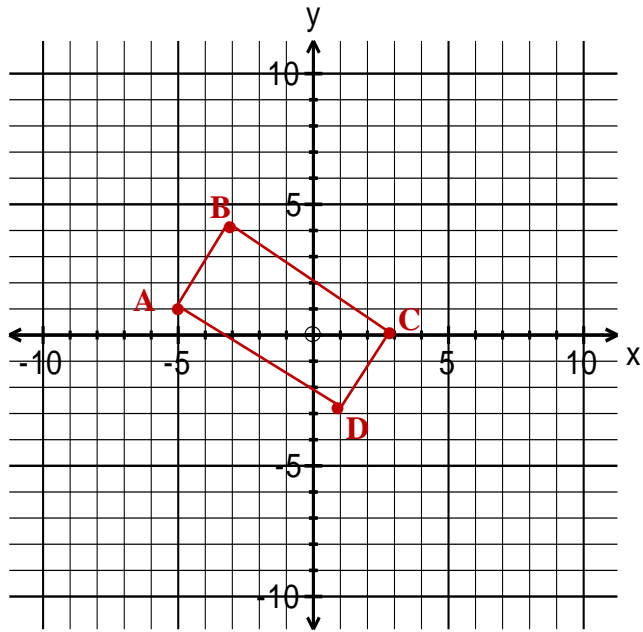
7. What is the slope of the line that is perpendicular to $y = \frac{1}{2}x - 4$? 7. **D**

- a) $-\frac{1}{2}$ b) 2 c) $\frac{1}{2}$ d) -2

8. What is the slope of the line parallel to $y + 6 = -4(x - 1)$? 8. **A**

- a) -4 b) 4 c) $\frac{1}{4}$ d) $-\frac{1}{4}$

14. a) Plots the points on the grid below.
 A(-5,1), B(-3,4), C(3,0), D(1,-3).
 Connect the points to form
 a parallelogram. (2 marks)



- b) Is the parallelogram a rectangle? Show all necessary workings. (3 marks)

$$\left. \begin{array}{l} \text{Slope AB} = \frac{3}{2} \quad \text{Slope CD} = \frac{3}{2} \\ \text{Slope AD} = -\frac{2}{3} \quad \text{Slope BC} = -\frac{2}{3} \end{array} \right\}$$

Adjacent sides have negative reciprocal slopes which means the sides are perpendicular and meet at right angles. Therefore, this parallelogram is also a rectangle.

15. Determine the slope of each line segment. Is $\triangle RST$ a right triangle? Justify your answer with workings. (3 marks)

Slope SR = 5

Slope ST = -1

Slope RT = $\frac{1}{11}$

Adjacent sides do not have negative reciprocal slopes therefore this is not a right triangle.

