Appendix 3
Jigsaw: Reading materials, Guiding questions, Multiple choices worksheet
Student 1 Material (Parallel and Perpendicular)

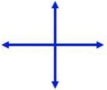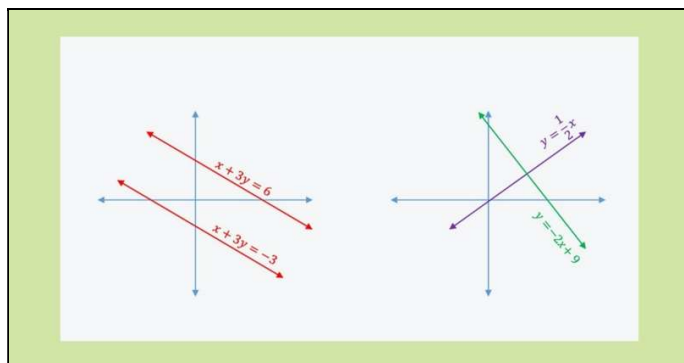**Guiding Questions:**

Student 2 Material (Slope)

Guiding Questions

Slope: Two-Point Formula — Sheet 1

Example:

Find the slope of a line passing through the points (4, 8) and (3, −2).

$$\text{Slope} = m = \frac{y_2 - y_1}{x_2 - x_1}$$

$$= \frac{-2 - 8}{3 - 4} = \frac{-10}{-1} = 10$$

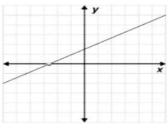Use two-point formula method to find the slope of a line passing through the given points.

1) (−4, 2) and (5, 6)

Slope = _____

2) (5, −5) and (7, 3)

Slope = _____

3) (2, 1) and (3, −10)

Slope = _____

4) (3, 9) and (1, 8)

Slope = _____

5) (7, 1) and (−2, 3)

Slope = _____

6) (0, −2) and (−6, 4)

Slope = _____

7) (−8, −5) and (−7, −4)

Slope = _____

8) (9, 8) and (5, 1)

Slope = _____
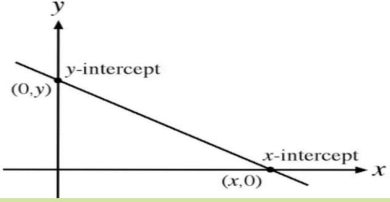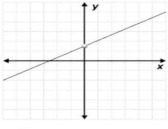
Student 3 Material (x-intercept and y-intercept)

x&y-intercept

x-intercept The point where a graph intersects the *x*-axis. The point where the equation of the graph has an *x*-value of zero.
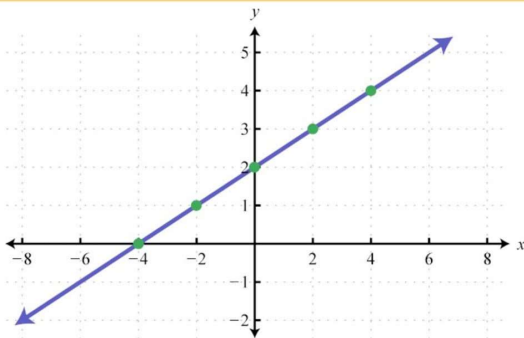
y-intercept The point where a graph intersects the *y*-axis. The point where the equation of the graph has an *x*-value of zero.

y-intercept
$(0,y)$

x-intercept
$(x,0)$

Guiding Questions

1) Label the coordinates of these five points.

2) Label x-intercept and y-intercept in the given figure.

Jigsaw Quiz

Jigsaw quiz

Part1: MCQ (20 marks, 4 marks for each)

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

   A. The x-intercept is 3 and the y-intercept is 4.

   B. The x-intercept is 3 and the y-intercept is –4.

   C. The x-intercept is 4 and the y-intercept is 3.

   D. The x-intercept is 4 and the y-intercept is –3.

2. What are the slope and y-intercept of the relation represented by the equation $10x + 5y - 15 = 0$?

   A. slope: 2, y-intercept: 3

   B. b. slope: 2, y-intercept: –3

   C. slope: –2, y-intercept: 3.

   D. slope: –2, y-intercept: –3

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

   A. The x-intercept is 3 and the y-intercept is –4.

   B. The x-intercept is 3 and the y-intercept is 4.

   C. The x-intercept is 4 and the y-intercept is –3.

   D. The x-intercept is 4 and the y-intercept is 3.

4. Which two lines are parallel?

   A. $y = 3x + 2$
   $y = 2x + 2$

   B. $y = 3x - 4$
   $y = x + 5$

   C. $y = x$
   $y = 5$

   D. $y = 0$
   $y = 2$

5. Identify the pair of perpendicular lines.

   A. $y = 5x + 2$
   $y = 5x + 1$

   B. $y = 2x + 1$
   $y = -2x + 5$

   C. $y = 3x + 4$
   $y = \frac{1}{3}x + 6$

   D. $y = 4x + 4$
   $y = 4x + 3$

Part2: Drawing

Draw the graph by the given linear equations.

Graph $y = \frac{1}{2}x + 4$