

Graphing Linear Equations

Question 1. Graph the following lines.

- a) $y = 2$
- b) $x = -1$
- c) $y = x + 2$
- d) $y = 3 - x$
- e) $2x + 4y = 1$
- f) $x - y = 0$
- g) $x = 4y + 2$

Question 2. Find the x- and y-intercepts of the following lines.

- a) $y = 2x - 5$
- b) $y = -3x + 6$
- c) $x - y = 1$
- d) $5x + 7y = 0$
- e) $2x + 7y + 1 = 0$
- f) $-3x + 2y = 12$

Question 3. Find the slope of the line that passes through the following points.

- a) (1,-7) and (0,-10)
- b) (0,2) and (2,-6)
- c) (3,5) and (-6,5)
- d) (0,-7) and (0,10)
- e) (2,-11) and (7,-6)
- f) (0,2) and (5,0)

Question 4. Write the following equations in slope-intercept form and identify the slope and y-intercept of each line.

- a) $y + x + 2 = 0$
- b) $2y - 3x = 5$
- c) $3x - 4y = 24$
- d) $x - y - 1 = 0$
- e) $-y + 5x = 2$
- f) $3y + 8 - 2x = 0$

Question 5. Determine the equation of the following lines using the slope and point given for each line. Write the equations in slope-intercept form.

- a) Slope = 1, point = (3,5)
- b) Slope = -2, point = (7,11)
- c) Slope = 4, point = (-3, 0)
- d) Slope = 6, point = (0,0)
- e) Slope = $-\frac{1}{2}$, point = (8,-5)
- f) Slope = $\frac{5}{4}$, point = (4,0)

Question 6. Determine if the following pairs of lines are parallel, perpendicular or neither.

- a) $y = 2x + 3$, $y = 2x + 10$
- b) $y = -x + 4$, $y = x + 2$
- c) $y = 5x$, $y = -\frac{x}{5}$
- d) $y = 2x + 10$, $y = 3x + 8$
- e) $x - y = 5$, $y = x - 2$
- f) $2x + y = 7$, $x = 5 + 2y$

You can check your answers on pages 269-271.