Practice Problems for X-Y Coordinates and Graphs
from www.topmath.info

1 What is the slope of the line $y = x/4$?

2 What is the slope of the line whose equation is $5x - y = 7$?

3 What is the slope of the line $y = x/10$?

4 What is the slope of the line $y = x/8 - 6$?

5 What is the slope of the line $y = x/10 + 2$?

6 What are the coordinates of the point at which the line that contains (-4,0) and (1,2) passes through the Y axis?

7 A line going through (-2,-2) has a slope of 1. What is the Y intercept of the line?

8 What is the equation of the line whose X intercept is (-7,0) and whose Y intercept is (0,-3) ?

9 What point is 5 units below (4,5)?

10 What point is 7 units to the left of (3,6)?

11 The points (1,19), (9,19), and (1,11) are three corners of a rectangle. What is the fourth point?

12 What point is 10 units below (-9,0)?

13 What point is 3 units to the left of (-12,-9)?

14 What is the slope of the line $y = 10x$?

15 What is the slope of the line whose equation is $9x + y = 1$?

1 ANSWER: 1/4

2 ANSWER: 5. EXPLANATION: Subtract 5x from each side to make the equation read -y = -5x + 7. Now multiply both sides by -1, and the equation reads y = 5x - 7. This is now in the form y = mx + b, where m (5) is the slope.

3 ANSWER: -1/10

4 ANSWER: 1/8

5 ANSWER: -1/10

6 ANSWER: (0,1 3/5). EXPLANATION: The X-coordinate of the Y-intercept will be 0, by definition. The slope of the line is the change in Y divided by the change in X, in this case, (2 - 0) / (1 - -4), which equals 0.4. Going from the first point, (-4,0), to the Y axis requires a move of 4 units in the X direction. Multiplying this value by the slope, we see that we must move by 1.6 units in the Y direction from (-4,0), which means the line intersects the Y axis at (0,1 3/5).

7 ANSWER: (0,0). EXPLANATION: The Y axis is 2 units to the right of point (-2,-2). Multiply this by the slope of the line (1) to see that the line moves by 2 units in the Y direction from the given point to the Y intercept. Add this to the Y coordinate of (-2,-2) to get the Y coordinate of the Y intercept.

8 ANSWER: Y = -3X/7 - 3. EXPLANATION: In going from the X intercept to the Y intercept, the line changes by -3 in the Y direction, and by 7 in the X direction. The slope is therefore -3/7, and the Y intercept is given as -3.

9 ANSWER: (4,5)

10 ANSWER: (-4,6)

11 ANSWER: (9,11). EXPLANATION: Since one X value appears twice, and one Y value appears twice, the fourth point must be the one that would make the other X and Y values appear twice in the completed list of points.

12 ANSWER: (-9,-10)

13 ANSWER: (-15,-9)

14 ANSWER: 10

15 ANSWER: -9. EXPLANATION: Subtract 9x from each side to make the equation read y = -9x + 1. This is now in the form y = mx + b, where m (-9) is the slope.