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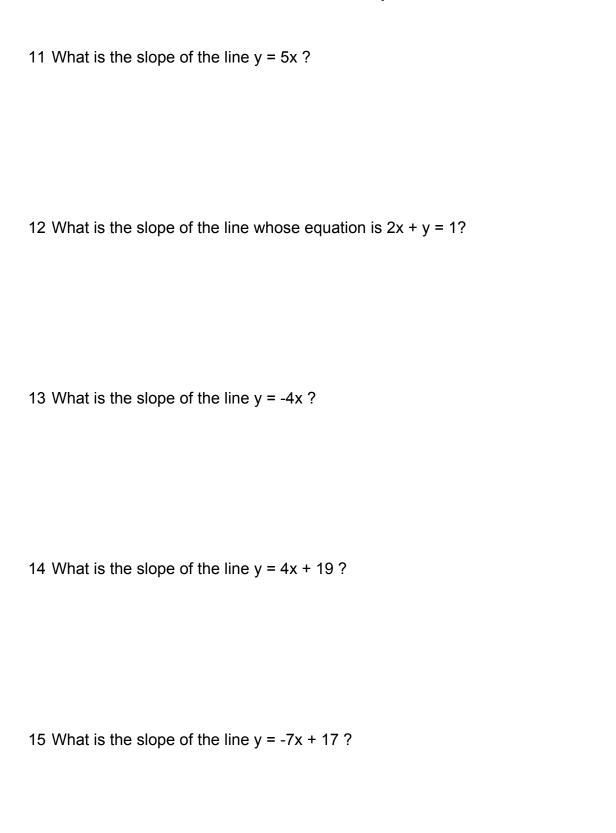## from www.topmath.info

1 What is the slope of the line y = x/3 + 2 ?

2 What is the slope of the line y = x/10 - 6 ?

3 What are the coordinates of the point at which the line that contains (1,-2) and (6,-5)
   passes through the Y axis?

4 A line going through (-7,-8) has a slope of 5. What is the Y intercept of the line?

5 What is the equation of the line whose X intercept is (-2,0) and whose Y intercept is (0,-4) ?

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

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

8 The points (-13,32), (-8,32), and (-13,23) are three corners of a rectangle. What is the fourth point?

9 What point is 7 units below (9,-10)?

10 What point is 4 units to the left of (7,-1)?

11 What is the slope of the line $y = 5x$?

12 What is the slope of the line whose equation is $2x + y = 1$?

13 What is the slope of the line $y = -4x$?

14 What is the slope of the line $y = 4x + 19$?

15 What is the slope of the line $y = -7x + 17$?

1 ANSWER: 1/3

2 ANSWER: -1/10

3 ANSWER: (0,-1 2/5). 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, (-5 - -2) / (6 - 1), which equals -0.6. Going from the first point, (1,-2), to the Y axis requires a move of -1 units in the X direction. Multiplying this value by the slope, we see that we must move by 0.6 units in the Y direction from (1,-2), which means the line intersects the Y axis at (0,-1 2/5).

4 ANSWER: (0,27). EXPLANATION: The Y axis is 7 units to the right of point (-7,-8). Multiply this by the slope of the line (5) to see that the line moves by 35 units in the Y direction from the given point to the Y intercept. Add this to the Y coordinate of (-7,-8) to get the Y coordinate of the Y intercept.

5 ANSWER: Y = -2X/1 - 4. EXPLANATION: In going from the X intercept to the Y intercept, the line changes by -4 in the Y direction, and by 2 in the X direction. The slope is therefore -2/1, and the Y intercept is given as -4.

6 ANSWER: (4,9)

7 ANSWER: (-1,7)

8 ANSWER: (-8,23). 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.

9 ANSWER: (9,-17)

10 ANSWER: (3,-1)

11 ANSWER: 5

12 ANSWER: -2. EXPLANATION: Subtract 2x from each side to make the equation read y = -2x + 1. This is now in the form y = mx + b, where m (-2) is the slope.

13 ANSWER: -4

14 ANSWER: 4

15 ANSWER: -7