

MAT 0020 Basic Algebra II

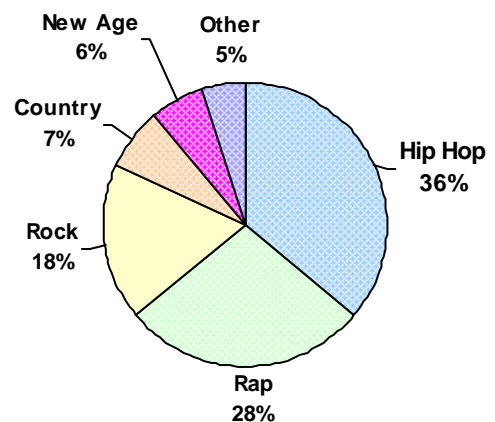
KEY CONCEPT REVIEW

CHAPTER 6, SECTIONS 6.1 – 6.4

TO RECEIVE CREDIT, DO ALL PROBLEMS, MAKE CORRECTIONS, AND SHOW ALL WORK.

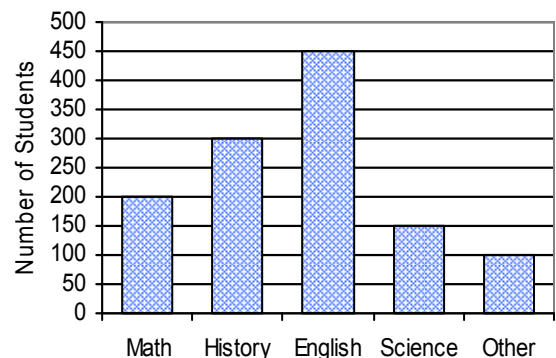
A recent survey of college students regarding their music preference produced the circle graph below. Refer to this graph to answer questions 1 and 2.

- 1) What percentage of students surveyed preferred hip hop and rap music?
- 2) If 2,450 students answered the survey, how many students said they preferred rock music?

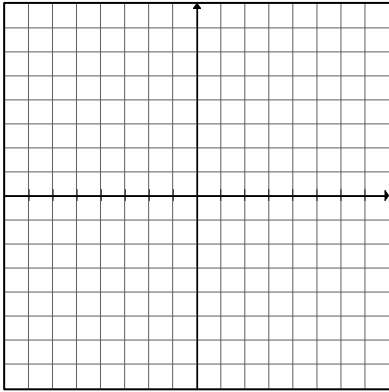


A recent survey of college students regarding their major course of study resulted in the bar graph shown below. Refer to this graph to answer questions 3 – 5.

- 3) How many students answered the survey?
- 4) What is the ratio of Math and Science majors to English majors?
- 5) What percent of students surveyed said their major was history?



- 6) Construct a graph of the rectangular coordinate system.



- Number and label the x- and y-axes.
 - Label the origin.
 - Label quadrants I – IV.
- 7) Refer to your graph above.
- Give an example of a point that lies in quadrant IV. Plot and label the point.
 - Give an example of a point that lies on the x-axis. Plot and label the point.

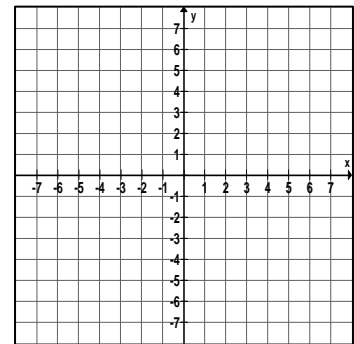
Complete each ordered pair so that it is a solution of the given equation.

- 8) $y - 2x = -4$ $(-6, \quad)$
- 9) $y = -2$ $(-5, \quad)$
- 10) $y = \frac{1}{2}x - 1$ $(4, \quad), (\quad, -1)$

Complete the table of ordered pairs for the given equation. Then plot the ordered pair solutions.

11) $3x + 2y = 6$

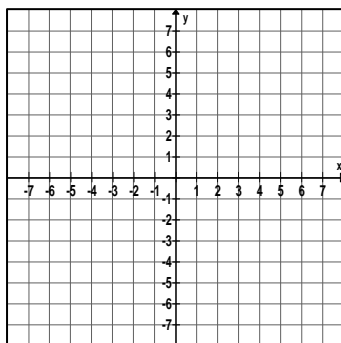
X	Y
0	
	0
1	
	-3



Complete the table of ordered pairs for the given equation. Plot the points and graph the line.

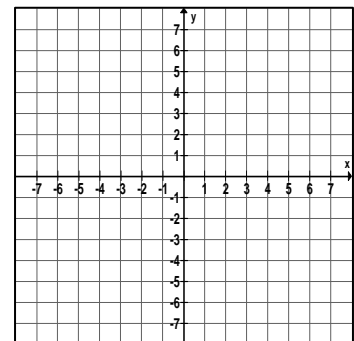
12) $y = 3x - 6$

X	Y
0	
1	
2	



13) $y = -4x - 3$

X	Y
0	
-1	
-2	



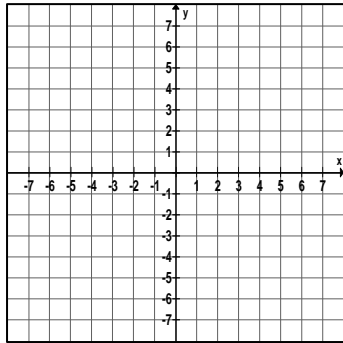
14) Suppose you are teaching a lesson on graphing. A student asks you how to graph

the equation $y = -\frac{3}{2}x$.

- a) What advice would you give this student?
- b) Construct the table of values you would use as an example.
- c) Graph the equation and label each point.

15) Graph the equation $y = \frac{1}{5}x + 2$

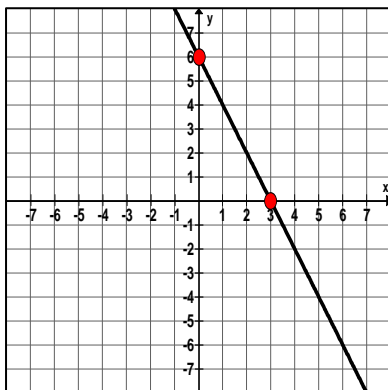
X	Y



16) What is the x-intercept? How do you find this point? Explain.

17) What is the y-intercept? How do you find this point? Explain.

18) Use the graph below to find the coordinates of the x- and y-intercepts.



Find the coordinates of the x- and y-intercepts for the given equations.

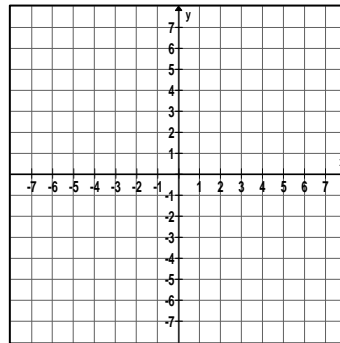
19) $-3x + 4y = -12$

- A) (4, 0), (0, 3)
- B) (4, -3)
- C) (-3, 0), (0, 4)
- D) (4, 0), (0, -3)

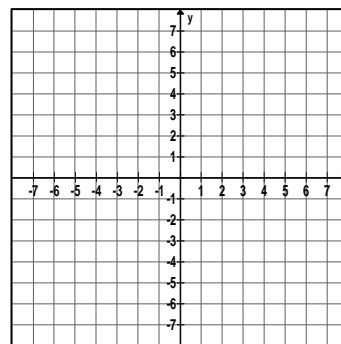
20) $y = 4x + 5$

Graph the equation by finding and plotting its intercepts.

21) $6y - 3x = -9$



22) $-3x - 5y = -15$

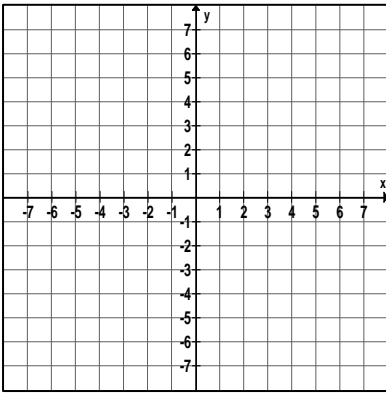


23) Give an example of a line that where the x- and y-intercepts are the same.

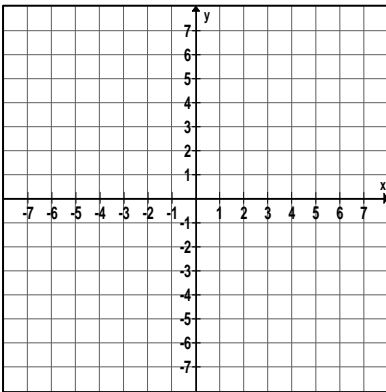
24) Give an example of a line that does not have an x-intercept.

25) Give an example of a line that does not have a y-intercept.

26) Graph the equation: $x - 4 = 0$.

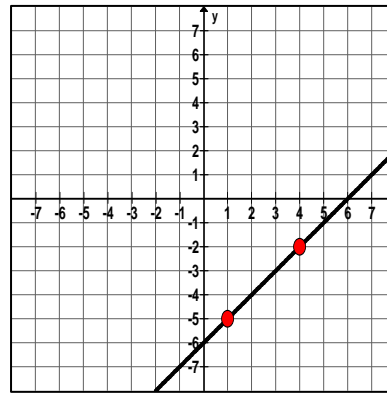


27) Graph the equation: $y = -5$.



28) How do you find the slope of a line when two ordered pairs are given? Explain.

29) Find the slope of the line.



30) Find the slope of the line that passes through the given ordered pairs.

- a) $(8, -4)$ and $(-6, 8)$
- b) $(5, -2)$ and $(5, 7)$

31) How do you find the slope of a line when an equation is given? Explain.

32) Find the slope of each line.

- a) $4y - 8x = 8$
- b) $y = -x + 3$