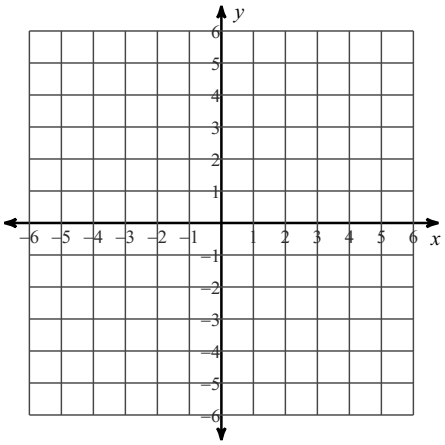
3.1 ~ Lines in the Coordinate Plane

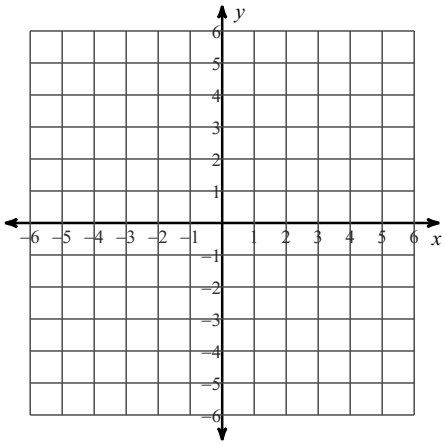
Past due on_____ Period____

Find the vertical and horizontal intercepts of the line and then sketch its graph.

1) $4x - 5y = 20$

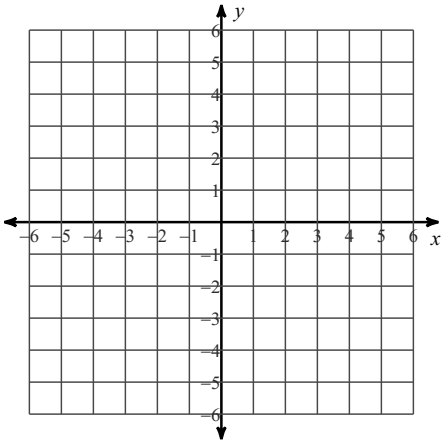


2) $x + 2y = -4$

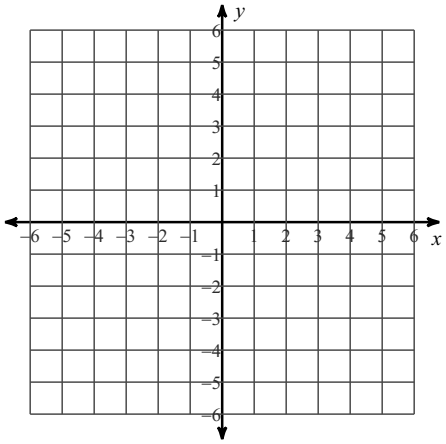


Identify the slope and the *y*-intercept of the line and then sketch its graph.

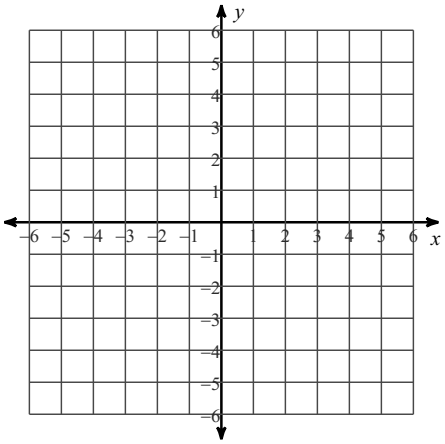
3) $y = -\frac{6}{5}x + 2$



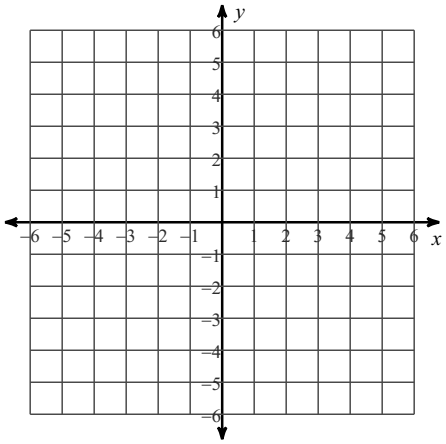
4) $y = \frac{4}{3}x - 4$



5) $y = -3x - 5$



6) $y = 6x - 3$



PLEASE SHOW ALL WORK ON A SEPARATE SHEET OF PAPER.
If you cram it on here, you will be asked to redo the assignment and resubmit. The assignment will be considered late.

Write the slope-intercept form of the equation of the line through the given point with the given slope.

7) through: $(3, -3)$, slope = -2

8) through: $(-1, -5)$, slope = 3

9) through: $(1, 3)$, slope = $\frac{2}{5}$

10) through: $(-4, 4)$, slope = $-\frac{1}{7}$

Write the slope-intercept form of the equation of the line through the given points.

11) through: $(-1, -5)$ and $(3, -4)$

12) through: $(-5, -3)$ and $(-3, -4)$

Find the value of *k* and write the equation of the line described.

13) A line passes through the points $(k + 10, -2k - 1)$ and $(2, 9)$ and has a y-intercept of 10.

14) A line passes through the points $(k + 9, -4k - 3)$ and $(-2, 1)$ and has a y-intercept of 9.

15) A line passes through the points $(4k - 1, 8k - 8)$ and $(3, -8)$ and has a y-intercept of -6.

Write the equation of the line through the given point.

16) A horizontal line through $(4, 7)$

17) A vertical line through $(-3, -2)$

Write the slope-intercept form of the equation of the line described.

18) The x-intercept of a line is 2 and the y-intercept is 4.

Write the slope-intercept form of the equation of each line. Then identify its slope.

19) $x - 7y = 35$

20) $4x - 3y = 1$

21) $7x + 2y = 33$

22) $7x - 6y = -24$

23) $5x + 2y = 24$

24) $11x + 5y = -35$