

## Geometry 3.6B Worksheet

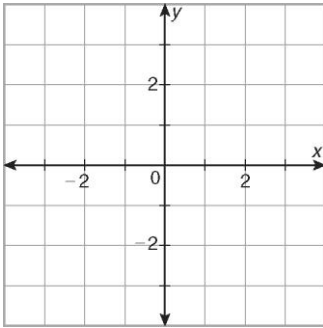
### *Lines in the Coordinate Plane*

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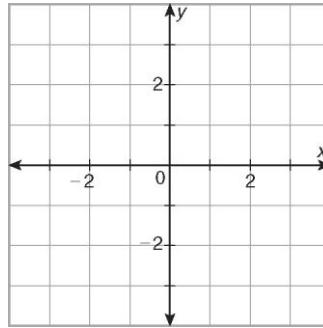
1. (a) What is the slope of a horizontal line?  
  
(b) Write the horizontal line through (3, 7) in point-slope form.  
  
(c) Rewrite the equation of the line in slope-intercept form:
  
2. (a) Write the line with slope  $-\frac{8}{5}$  through (1, -5) in point-slope form.  
  
(b) Rewrite the equation of the line in slope-intercept form:
  
3. (a) Calculate the slope through (-1, -7) and (2, 14):  
  
(b) Write the equation of the line through (-1, -7) and (2, 14) in point-slope form:  
  
(d) Rewrite the equation of the line in slope-intercept form:
  
4. (a) What are the coordinate of the x-intercept -2?  
  
(b) What are the coordinate of the y-intercept -1?  
  
(c) Write the equation of the line with x-intercept -2 and y-intercept -1 in point-slope form:  
  
(d) Rewrite the equation of the line in slope-intercept form:
  
5. (a) What is the slope of the line parallel to  $y = \frac{-1}{2}x - 8$ ?  
  
(b) Write the equation of the line parallel to  $y = \frac{-1}{2}x - 8$  and goes through the point (1, 4):  
  
(c) Rewrite the equation of the line in slope-intercept form:

6. (a) What is the slope of the line perpendicular to  $y = \frac{-1}{2}x - 8$ ?
- (b) Write the equation of the line perpendicular to  $y = \frac{-1}{2}x - 8$  and goes through the point (1, 4):
- (d) Rewrite the equation of the line in slope-intercept form:

**Graph each line.**



7.  $y + 3 = \frac{3}{4}(x + 1)$



8.  $y = -\frac{4}{3}x + 2$

**Determine whether the lines are parallel, intersect, or coincide.**

9.  $x - 5y = 0, y + 1 = \frac{1}{5}(x + 5)$

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10.  $2y + 2 = x, \frac{1}{2}x = -1 + y$

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11.  $y = 4(x - 3), \frac{3}{4} + 4y = -\frac{1}{4}x$

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