

Lab for Linear Function Review

Use good notation and show appropriate work.

Name _____

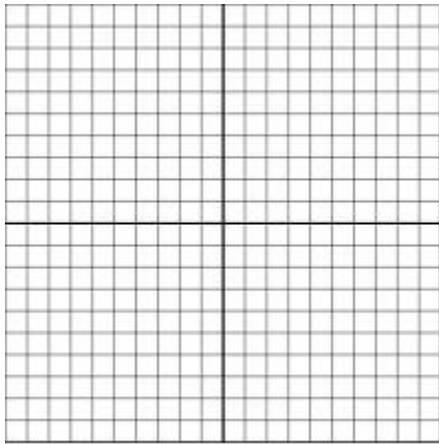
The slope formula, $m = \frac{y_2 - y_1}{x_2 - x_1}$.

Three equations of a line:

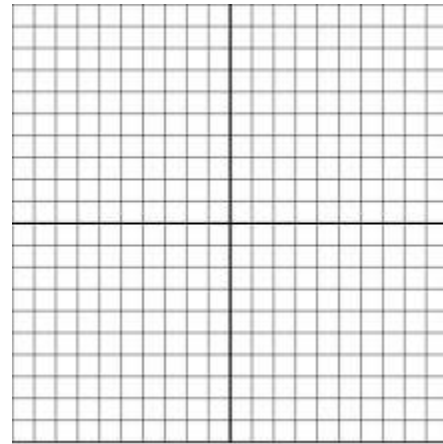
- point-slope equation $y - y_1 = m(x - x_1)$
- slope-intercept equation $y = mx + b$
- standard equation $ax + by = c$

1. Graph each line on the given coordinate plane.

(a) $y = -\frac{3}{5}x + 4$

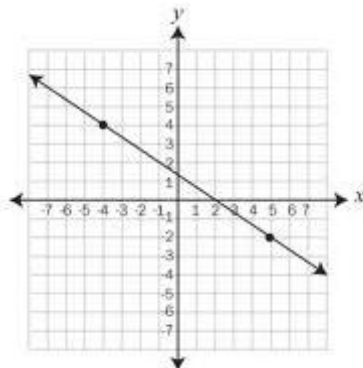


(b) $2x - 3y = 15$

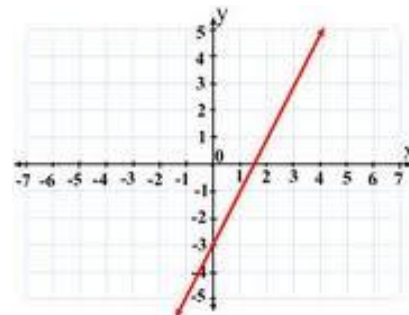


2. Find the equation of the line given by each graph.

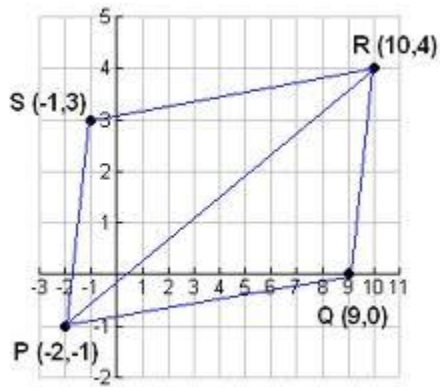
(a)



(b)



3. Find an equation for each line determined by the given segments.



4. (a) What does a 7% grade mean?



- (b) Write a linear function for this situation.

5. Write a linear equation for each problem.

- (a) A savings account pays an annual interest rate of 2.3%. How much money would be in the account at the end of one year?
- (b) A power company charges a monthly facility fee of \$20 and 9.1¢ per kilowatt hour. What is the monthly charge for electricity?
- (c) Water boils at 212°F or 100°C and water freezes at 32°F or 0°C. Find an equation that converts a Fahrenheit temperature to Celsius.
- (d) A single person who is a resident of Minnesota with a taxable income of \$74,780 must pay \$4,884.91 in taxes. The tax rate for any additional taxable income is 7.85%. Find the tax owed by a single person with a high income.