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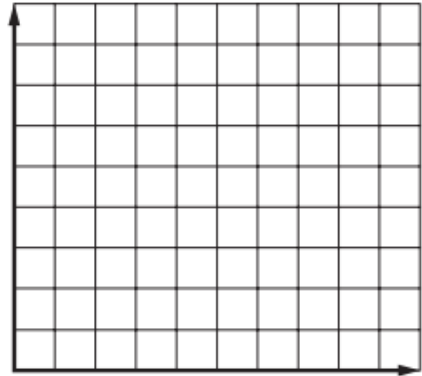
### Slope-Intercept Word Problems

1. Suppose that the water level of a lake is 35 feet and that it is receding at a rate of 1.5 feet per day.

a. Write an equation for the water level,  $L$ , after  $d$  days.

b. Graph the equation.

c. In how many days will the water level be 20 feet?



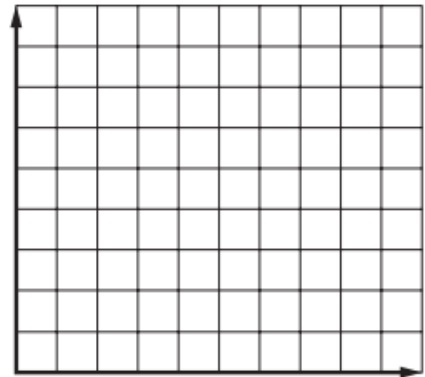
2. Tina babysits afterschool and charges a flat fee of \$3, plus \$5 per hour.

a. Write an equation for the cost,  $C$ , after  $h$  hours of babysitting.

b. What do the slope and the y-intercept represent in this problem situation?

c. Graph the equation.

d. How much money will Tina make if she babysits 5 hours?



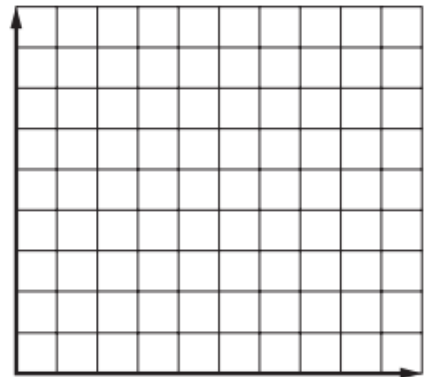
3. An electrician charges \$25 for a service call plus \$50 per hour of service.

a. Write an equation in slope-intercept form for the cost,  $C$ , after  $h$  hours of service.

b. Graph the equation.

c. What will be the total cost for 8 hours of work?

d. If an electrician earned \$225, how many hours did the repair last?



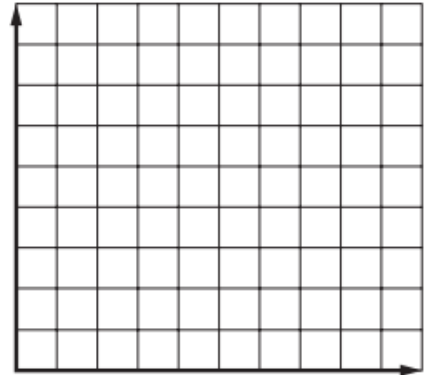
4. Ryley collected 125 pounds of aluminum cans to recycle. He plans to collect an additional 25 pounds each week.

a. Write an equation to represent the total pounds,  $P$ , of aluminum cans after  $w$  weeks.

b. What do the slope and y-intercept represent in this problem situation?

c. Graph the equation.

d. How many weeks will it take Ryley to collect 400 pounds of cans?

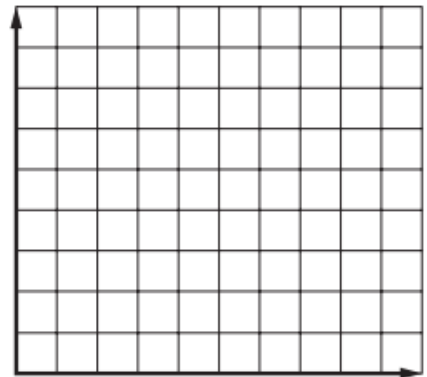


5. A boat rental service charges a \$20 transportation fee and \$15 dollars each hour to rent a boat.

a. Write an equation representing the cost,  $y$ , of renting a boat for  $x$  hours.

b. Graph the equation.

c. Suppose you and your best friend plan to rent a boat for 6 hours. How much money will it cost to rent the boat?

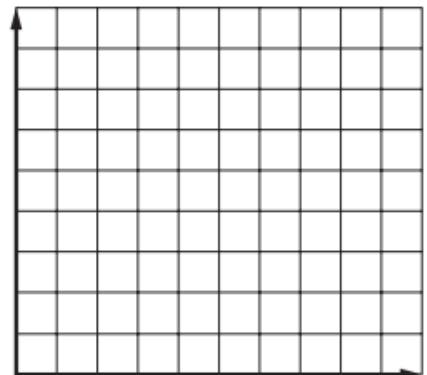


6. An attorney charges a fixed fee on \$250 for an initial meeting and \$150 per hour for all hours worked after that.

a. Write an equation in slope-intercept form to represent this situation.

b. Graph the equation.

c. Find the total cost for a meeting and 6 hours of work.



Answer Key:

\*Note: Each student will need to label the x-axis and y-axis on their graph in order to see if they graphed the equation correctly.

1a.  $L = -1.5d + 35$

1c.  $20 = -1.5d + 35$   
 $d = 10$  days

2a.  $C = 5h + 3$

2b. The slope represents Tina's hourly charge of \$5 and the y-intercept represents her flat fee of \$3.

2d.  $C = 5(5) + 3$   
 $C = \$28$

3a.  $C = 50h + 25$

3c.  $C = 50(8) + 25$   
 $C = \$425$

3d.  $225 = 50h + 25$   
 $h = 4$  hours

4a.  $P = 25w + 125$

4b. In this situation, the slope represents the amount of aluminum cans (in pounds) that Ryley plans to collect each week. The y-intercept represents the amount of aluminum cans (in pounds) that Ryley has already collected.

4d.  $400 = 25w + 125$   
 $w = 11$  weeks

5a.  $y = 15x + 20$

5c.  $y = 15(6) + 20$   
 $y = \$110$

6a.  $y = 150x + 250$

6c.  $y = 150(6) + 250$   
 $y = \$1150$