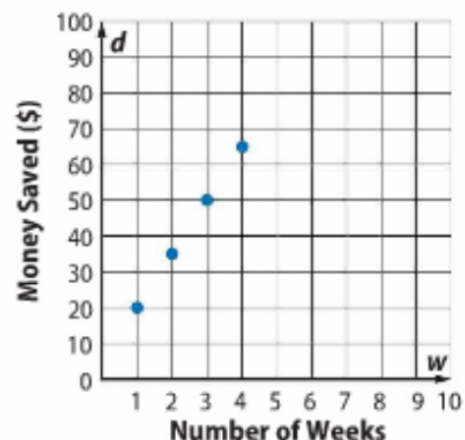


9. **Financial Literacy** Kara is saving money for a school trip. The graph shows how much money she has saved over 4 weeks.

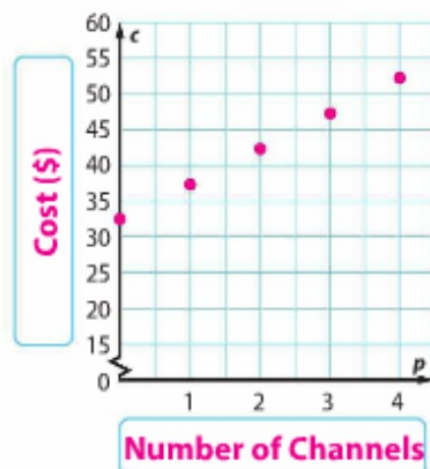
- a. Write an equation to find how much money d Kara can save over w weeks. $d = 15w + 5$
- b. Use the equation to determine how much money Kara can save in 24 weeks. $\$365$



10. **CCSS Use Math Tools** Cornett Cable charges \$32.50 a month for basic cable television. Each premium channel selected costs an additional \$4.95 per month.

- a. Write an equation to find the total monthly cost c for any number of premium channels p . $c = 32.50 + 4.95p$
- b. Make a table to show the monthly cost for 0, 1, 2, 3, and 4 premium channels. Then graph the ordered pairs.

p	$32.50 + 4.95p$	c
0	$32.50 + 4.95(0)$	32.50
1	$32.50 + 4.95(1)$	37.45
2	$32.50 + 4.95(2)$	42.40
3	$32.50 + 4.95(3)$	47.35
4	$32.50 + 4.95(4)$	52.30



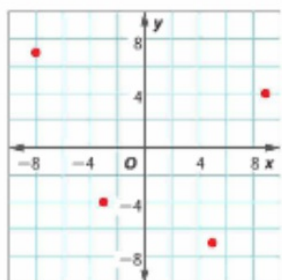
and range.

10. $\{(9, 4), (5, -7), (-3, -4), (-8, 7)\}$

D: $\{-8, -3, 5, 9\}$; R: $\{-7, -4, 4, 7\}$

Homework Help

x	y
9	4
5	-7
-3	-4
-8	7

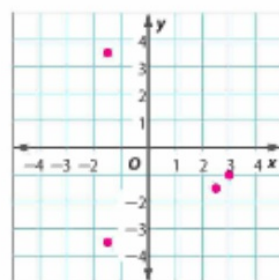


11. $\{(-1.5, 3.5), (2.5, -1.5), (3, -1), (-1.5, -3.5)\}$

D: $\{-1.5, 2.5, 3\}$;

R: $\{-3.5, -1.5, -1, 3.5\}$

x	y
-1.5	3.5
2.5	-1.5
3	-1
-1.5	-3.5

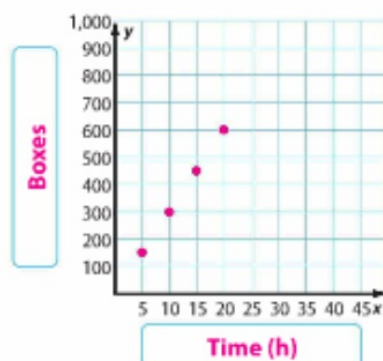


12. A candy company produces 30 boxes of candy per hour.

- a. Make a table of ordered pairs in which the x -coordinate represents the number of hours and the y -coordinate represent the number of boxes of candy in 5, 10, 15, and 20 hours.

x	y
5	150
10	300
15	450
20	600

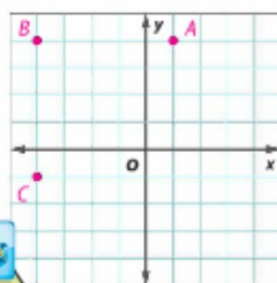
- b. Graph the ordered pairs.



13. **Identify Structure** Graph the points in the table on a coordinate plane. Label the points A, B, and C. What are the coordinates of point D if points A, B, C, and D form a square?

D(1, -1)

x	y
1	4
-4	4
-4	-1





14. $f(-12)$ if $f(x) = 2x + 15$
 $f(x) = 2x + 15$
 $f(-12) = 2(-12) + 15$
 $f(-12) = -24 + 15$
 $f(-12) = -9$

15. $f(-7)$ if $f(x) = 8x + 15$
-41

16. $f(9)$ if $f(x) = 5x - 16$
29

Choose four values for x to make a function table for each function. Then state the domain and range of the function.

17. $f(x) = x - 9$

Sample answer:

x	$x - 9$	$f(x)$
-2	-2 - 9	-11
-1	-1 - 9	-10
7	7 - 9	-2
12	12 - 9	3

D: {-2, -1, 7, 12}

R: {-11, -10, -2, 3}

18. $f(x) = 7x$

Sample answer:

x	$7x$	$f(x)$
-5	7(-5)	-35
-3	7(-3)	-21
2	7(2)	14
6	7(6)	42

D: {-5, -3, 2, 6}

R: {-35, -21, 14, 42}

19. $f(x) = 4x + 3$

Sample answer:

x	$4x + 3$	$f(x)$
-4	4(-4) + 3	-13
-2	4(-2) + 3	-5
3	4(3) + 3	15
5	4(5) + 3	23

D: {-4, -2, 3, 5}

R: {-13, -5, 15, 23}

20. A photographer takes an average of 15 pictures per session. The total number of pictures $p(s)$ is a function of the number of sessions s .

a. Identify the independent and dependent variables.

The number of pictures $p(s)$ is the dependent variable and the number of sessions s is the independent variable.

b. What values of the domain and range make sense for this situation?

Explain. Only whole numbers make sense for the domain because you cannot have a fraction of a session. The range values will be multiples of 15.

c. Write a function to represent the total number of pictures taken. Then determine the number of pictures taken in 22 sessions.

$p(s) = 15s$; 330 pictures

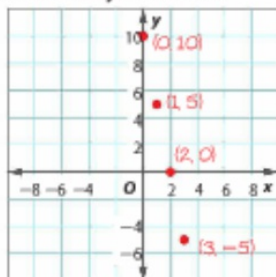
21. Reason Abstractly Leon belongs to a music club that charges a monthly fee of \$5, plus 0.50 per song that he downloads. Write a function to represent the amount of money $m(s)$ he would pay in one month to download s songs. What is the cost if he downloads 30 songs?

$m(s) = 5 + 0.50s$; \$20



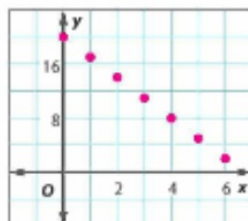
number of each type of shirt Bethany can have if she buys 10 shirts.

Homework Help



She cannot buy negative amounts. So, she can buy 0 T-shirt packs and 10 shirts individually, 1 T-shirt pack and 5 shirts individually, or 2 T-shirt packs and 0 shirts individually.

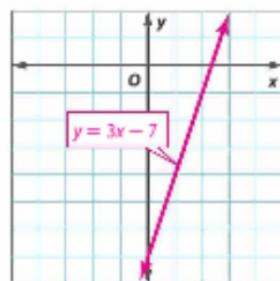
how many of each type of goldfish Tasha can buy for \$20.



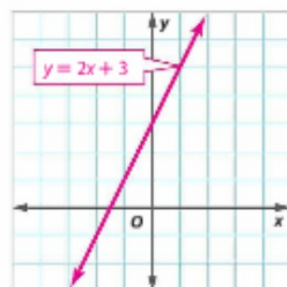
She can buy 20 common and 0 fancy, 17 common and 1 fancy, 14 common and 2 fancy, 11 common and 3 fancy, 8 common and 4 fancy, 5 common and 5 fancy or 2 common and 6 fancy.

Graph each function.

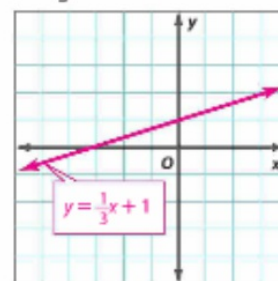
13. $y = 3x - 7$



14. $y = 2x + 3$



15. $y = \frac{1}{3}x + 1$



16. **CCSS Model with Mathematics** The equation $y = 1.09x$ describes the approximate number of yards y in x meters.

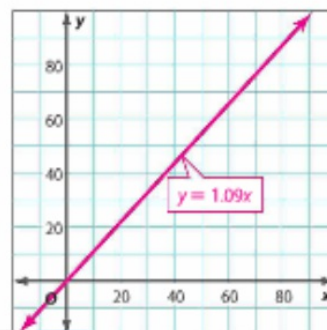
a. Would negative values of x have any meaning in this situation? Explain.

No; you cannot have a negative distance.

b. Graph the function.


c. About how many meters is a 40-yard race?

36.7 m



10. Two players played a game. The first player's score is represented by the function $p = 5c - 3$, where p is the number of points scored and c is the number of correct answers. The second player's score is shown in the table.
- Compare the functions by comparing their y -intercepts and rates of change. **Player 1: 5 points per question; Player 2: 5 points per question.**
Both have the same rate of change, but the function for Player 1 has a y -intercept of -3 and the function for Player 2 has a y -intercept of 0 .
 - How many points will the first player have if he or she correctly answers 30 questions? **147 points**

Questions Answered	Score
1	5
2	10
3	15
4	20

11.  **Justify Conclusions** Jesse and Juan each open savings accounts. The amounts in Jesse's account are shown in the table. Juan saves \$5 per week. Who will have more saved in 8 weeks? Explain.

Juan; Sample answer: In 8 weeks Juan will have 5(8) or \$40. Jesse will have saved \$37.

Jesse's Savings	
Week	Amount Saved (\$)
1	16
2	19
3	22
4	25
5	28

12. Canada Olympic Park features sports training and entertainment facilities. The Monster zip line produces average speeds of 120 kilometers per hour. A smaller line produces speeds represented by the function $d = 50h$ where d is the distance in kilometers after h hours. How much farther could you travel on the Monster zip line in 0.25 hours?

17.5 km

13. Raj gets a 1.5 mile head start and runs at a rate of 4.5 miles per hour. Jacinda's progress is represented by a graph that goes through the points (1, 10), (2, 20), and (3, 30). How long will Jacinda need to run to catch up with Raj? **$\frac{3}{11} h$**

