Directions: Type your answer in the box.

Read the banner!

Based on the transitive property, complete this statement.

$a \geq b$ $b \geq c$ $a \geq c$

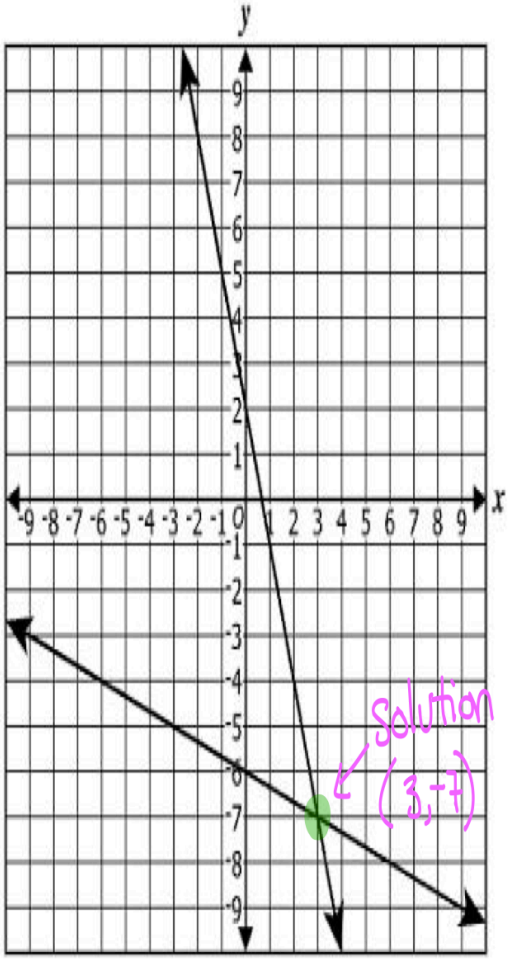
If $2(y-3) \geq 3x-4$ and $3x-4 \geq 6-y$, then $2(y-3) \geq$?

6-y

If $a > b$ or $1 > 2$
and $b > c$ or $2 > 3$
then $a > c$ or $1 > 3$

This system of linear equations is graphed as shown.

$$\begin{cases} 3x + y = 2 \\ x + 3y = -18 \end{cases}$$



What is the solution to this system of equations?

- A (2, −6)
- B (3, −7)
- C (−6, 2)
- D (−7, 3)

Renee is going bowling.

- The cost per game is $2.50.
- Renee will need to rent a pair of bowling shoes for $1.50.
- She can spend up to $16.00 to bowl and rent a pair of shoes.

What is the maximum number of games that Renee can bowl?

A 4

B 5

C 6

D 9

$16 \geq 1.50 + 2.50x$

$-1.50 \quad -1.50$

$14.50 \geq 2.50x$

$\frac{14.50}{2.50} \geq \frac{2.50x}{2.50}$

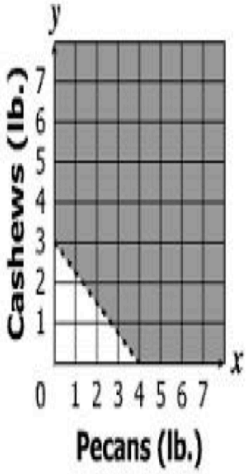
$5.8 \geq x$

can not pay for part of a game or play part of a game

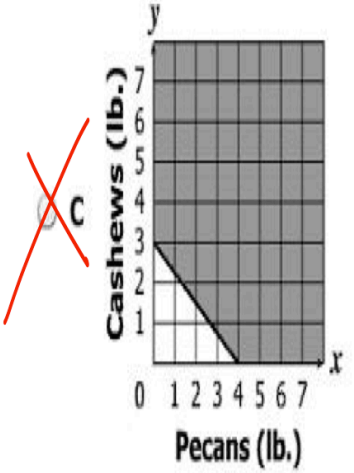
means less than = shade below can he spend exactly $24? Yes
line is solid because it can be equal

Malik can spend no more than $24 to buy pecans and cashews. He will pay $6 per pound for pecans and $8 per pound for cashews. Which graph best represents the number of pounds of pecans and the number of pounds of cashews Malik can buy?

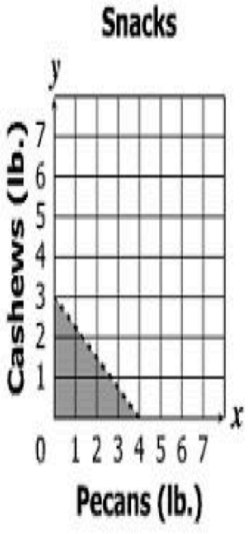
A



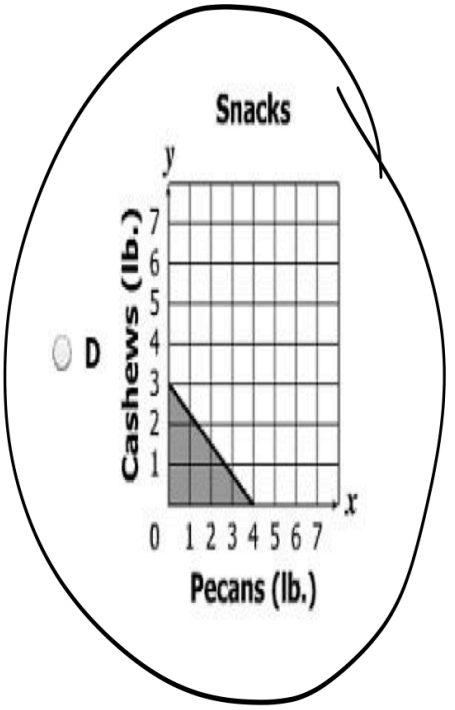
C



B



D

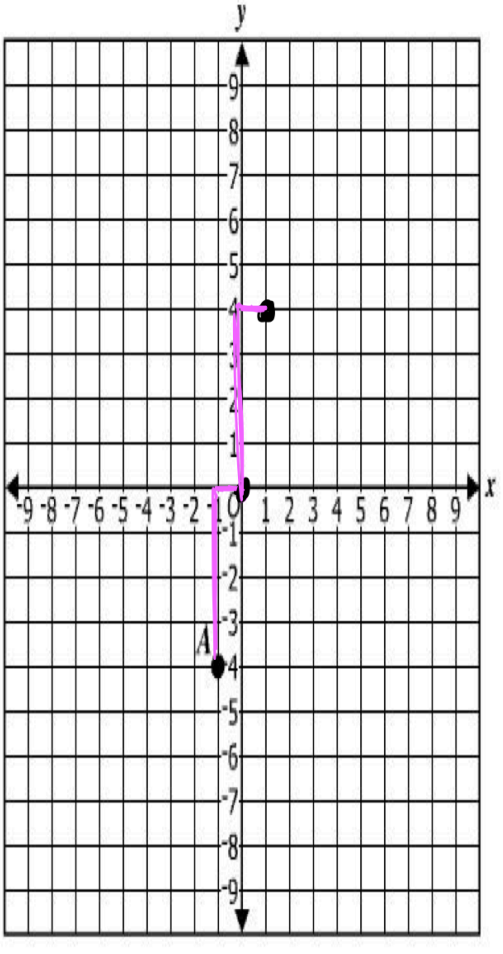


Directions: Click on the grid to plot two points. The coordinates of the points must be integers.

Read banner

Point A is an element of a direct variation. Plot two points, other than A, that are elements of this direct variation. The coordinates of the points must be integers.

direct variation = straight line through origin



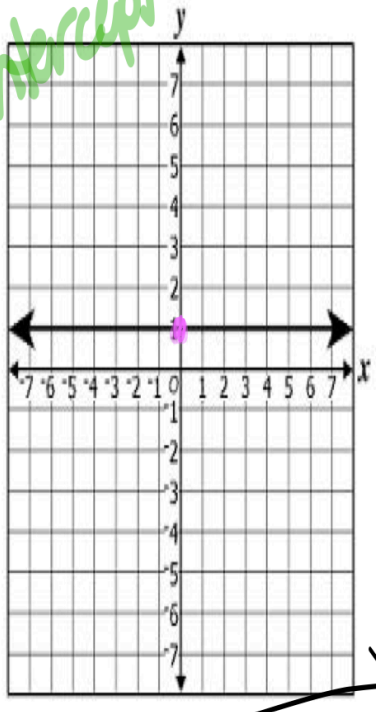
only Plot Two of the following points

{(-2,-8), (0,0), (1,4), (2,8)}

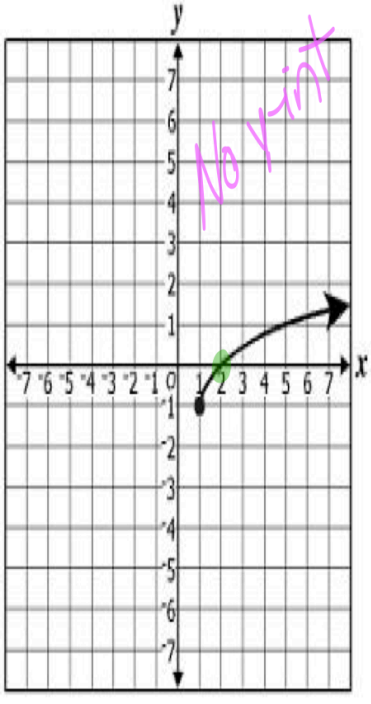
Which graph has exactly one x-intercept and one y-intercept?

No x-intercept

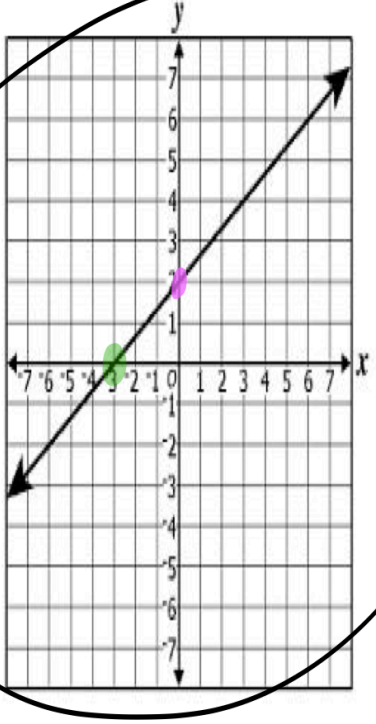
A



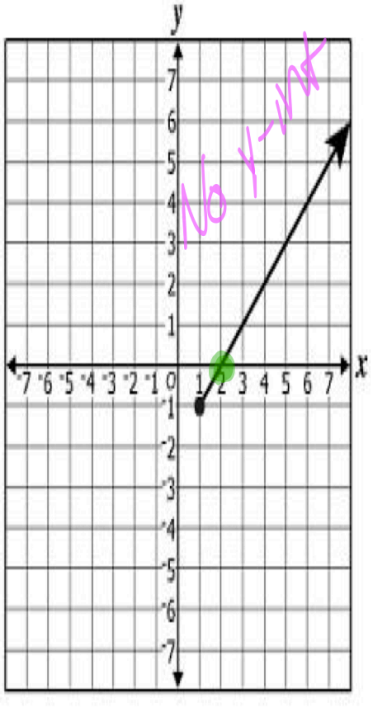
C



B



D



Which equation best represents this data set?

$\{(-4, -4.8), (-3, -8.2), (-2, -9.1), (-1, -8.1), (0, -4.7), (1, 0.3)\}$

- A $y = 1.1x^2 + 4.2x + 4.9$
- B $y = 1.1x^2 + 4.2x - 4.9$
- C $y = 1.1x - 4.2$
- D $y = 1.1x + 4.2$

look at the y-values, if they switch from decreasing to increasing or from increasing to decreasing use the QuadReg

L1	L2	L3 2
-4	-4.8	------
-3	-8.2	
-2	-9.1	
-1	-8.1	
0	-4.7	
1	3	

L2(7) =

Stat
1
$X_5 = L_1$
$Y_5 = L_2$
Stat
→ Calc
5
enter

```
QuadReg
 y=ax²+bx+c
 a=1.057142857
 b=4.228571429
 c=-4.885714286
```

A relationship between x and y is shown in this table.

x	y
0	1
1	2
2	5
3	10

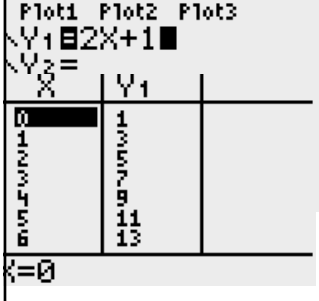
Which equation represents this relationship?

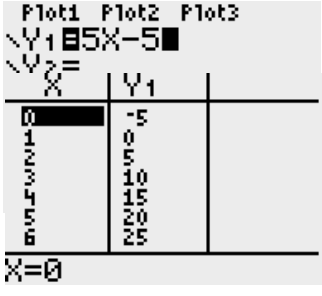
- A $y = 2x + 1$
- B $y = 5x - 5$
- C $y = x^2 + 1$
- D $y = (x+1)^2$

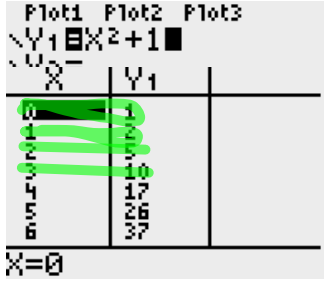
Y=

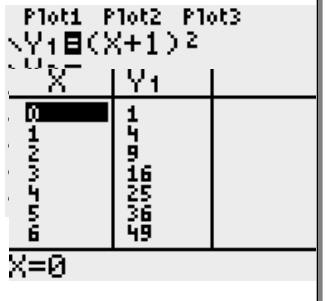
Y_1 = answer choices 1@a time

2nd graph Match Tables









Ms. Scott will pay $2,000 to have her house painted. The amount each painter earns, A, varies inversely for the number of painters, n, that will paint the house. Which equation best represents this situation?

- A $A = 2{,}000 + n$
- B $2{,}000 = A + n$
- C $A = 2{,}000n$
- D $2{,}000 = An$

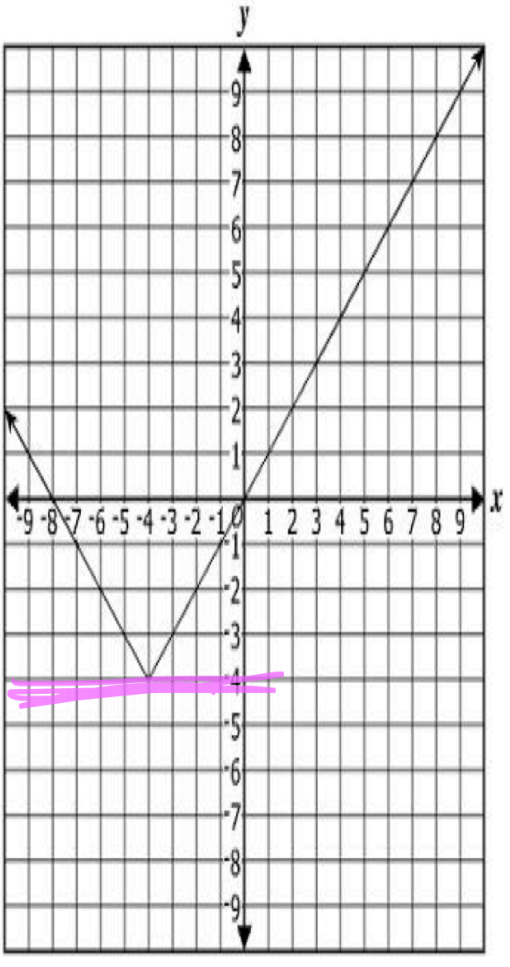
Inverse Variation

$y = \frac{K}{x}$

$xy = K$

K = constant of Variation

The following graph shows a relation.



Which of the following best describes the range of this relation?

- A All real numbers
- B All real numbers between −10 and 10
- C All real numbers less than or equal to −4
- D All real numbers greater than or equal to −4

range = y values
lowest y-value is -4
all other values are greater

Directions: Click and drag the answers to the correct boxes.

Each of these data sets has a mean of 20.

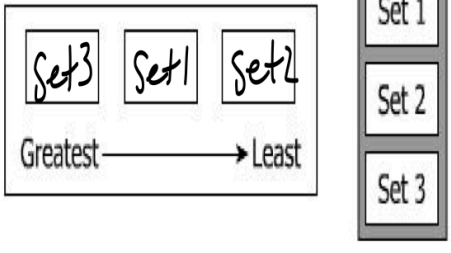
Set 1: {18, 19, 20, 21, 22}

Set 2: {20, 20, 20, 20, 20}

Set 3: {16, 18, 20, 21, 25}

Order the sets from greatest standard deviation to least standard deviation.

greater spread = bigger standard deviation

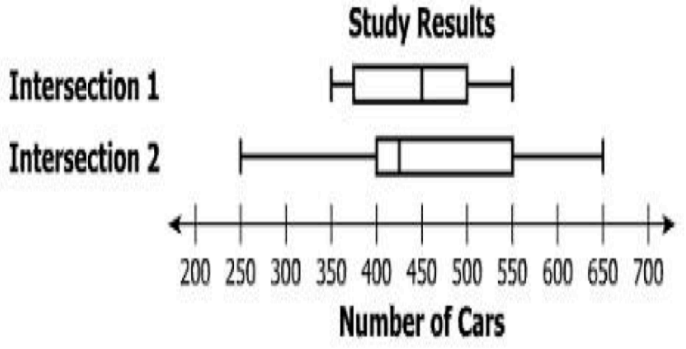


Set 1

Set 2

Set 3

A study was conducted to determine the number of cars that passed through two intersections each day for 20 days. The results are summarized in these box-and-whisker plots.



Which statement is best supported by these data?

A The range of the data for Intersection 2 is twice the range of the data for Intersection 1.

B The lower quartile for Intersection 1 is greater than the lower quartile for Intersection 2.

C The interquartile range for Intersection 1 is the same as the interquartile range for Intersection 2.

D The total number of vehicles that passed through Intersection 2 is greater than the total number of vehicles that passed through Intersection 1.

Which of these functions has exactly two different zeros?

- A $f(x)=\frac{1}{10}x+4$
- B $g(x)=\frac{3x-10}{3}$
- C $h(x)=x^2-4x+4$
- D $k(x)=x^2+11x+24$

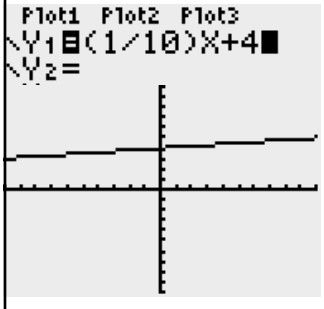
Y=

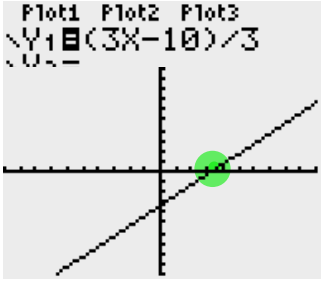
Y_1 = answer choices 1 at a time

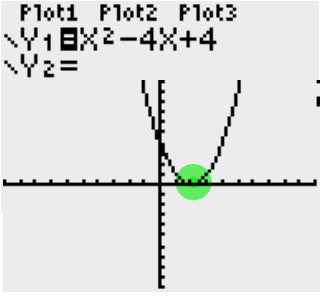
graph

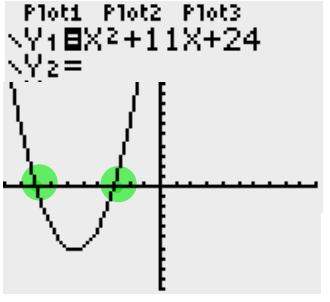
look how many x-intercepts

must have 2









In which table does y vary directly with x?

$y = kx$

$\frac{y}{x} = k$

Must divide y by x and get the exact same number

A

x	y
1	3
2	3
3	3

C

x	y
1	5
2	7
3	9

B

x	y
1	4
2	8
3	12

D

x	y
1	9
2	7
3	5

Which equation could represent a graph with x-intercepts of $(4, 0)$ and $(-7, 0)$?

- A $y = x^2 + 3x - 28$
- B $y = x^2 - 3x - 28$
- C $y = x^2 + 3x + 28$
- D $y = x^2 - 3x + 28$

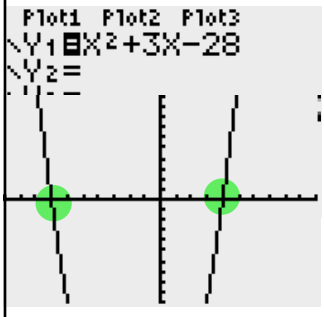
Y=

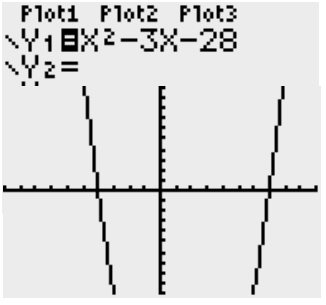
Y_1 = answer choices 1 at a time

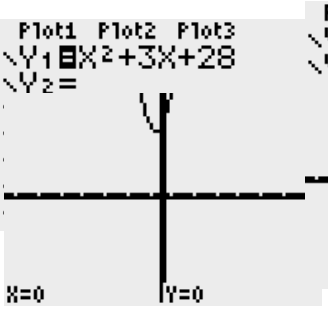
graph

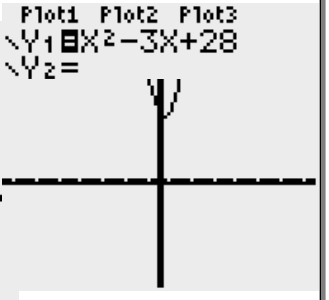
look at x-intercepts

must be -7 and 4









Which number is a zero of the function h ?

$$h(x) = x^2 + 3x - 18$$

A -6

B -3

C 0

D 6

$Y=$

$Y_1 =$

graph

look at x-intercepts