

Trashketball Review



Unit 2: Linear Equations

Rules of the Game:

- 1. Every person in the class must have paper to workout each problem. Whether it is your turn or not.**
- 2. Only the person given the question can answer. No talking!**
- 3. If you get the question right you get to make a paper basketball.**
- 4. If you get it wrong the other team has a chance to steal. If they get it right they get the basketball.**
- 5. At the end of the game, students with paper basketballs get to attempt a shot.**
- 6. The team with the most points wins!**

Point Values!!!

Students may choose where to shoot from....

5 point shot (From Down Town!!!!!!)

3 point shot (Make it rain!!!)

2 point shot (Jump Shot!!)

1 point shot (For those that do not want to shoot!)

Find the slope given two points

1. (1, -2) and (-1, -3)

$$m = \frac{-3 - (-2)}{-1 - 1}$$
$$= \frac{-1}{-2}$$
$$= \frac{1}{2}$$

2. (-4, 3) and (-4, 6)

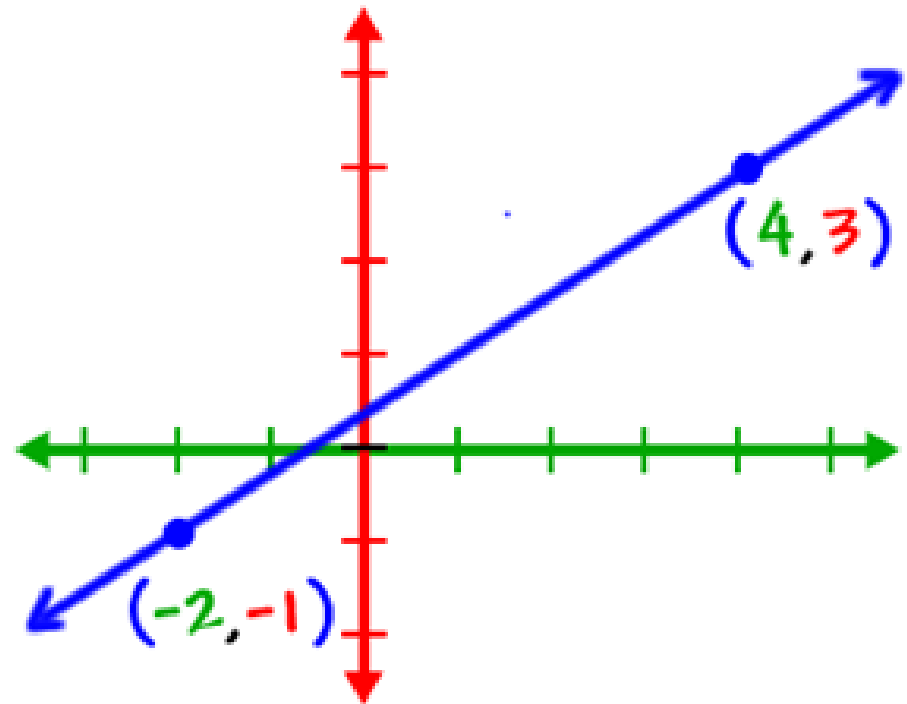
$$m = \text{undefined}$$
$$= \frac{6 - 3}{-4 - (-4)} = \frac{3}{0}$$

Find the slope....

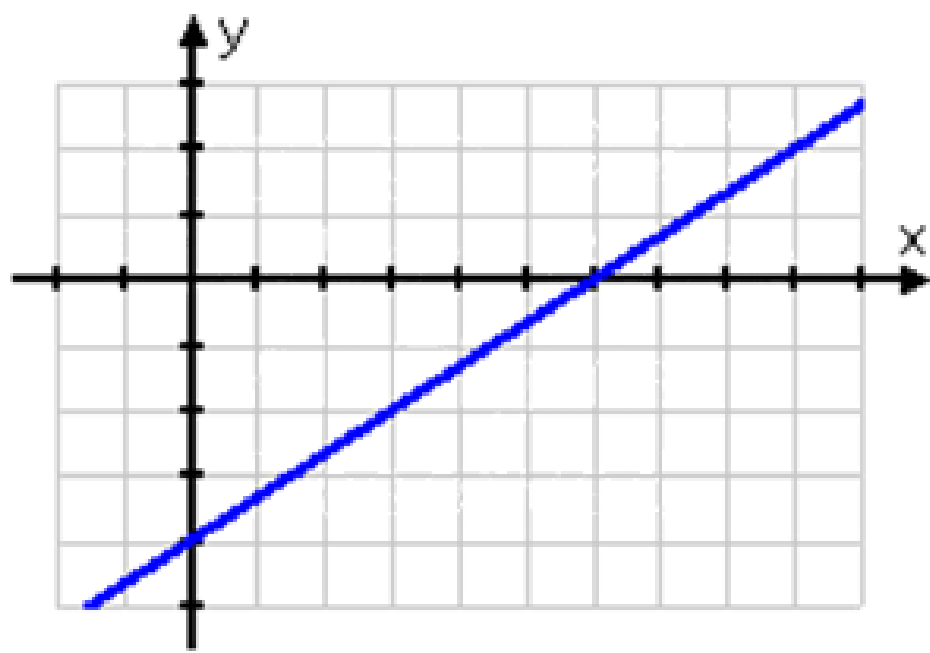
$$m = \frac{2}{3}$$

$$m = \frac{-1-3}{-2-4} = \frac{-4}{-6} \\ = \frac{2}{3}$$

3.



4.



Find the slope given the table....

5.

Option A

X (years)	Y (\$ in thousands)
1	27
2	31
3	35
4	39

$1 <$ > 4

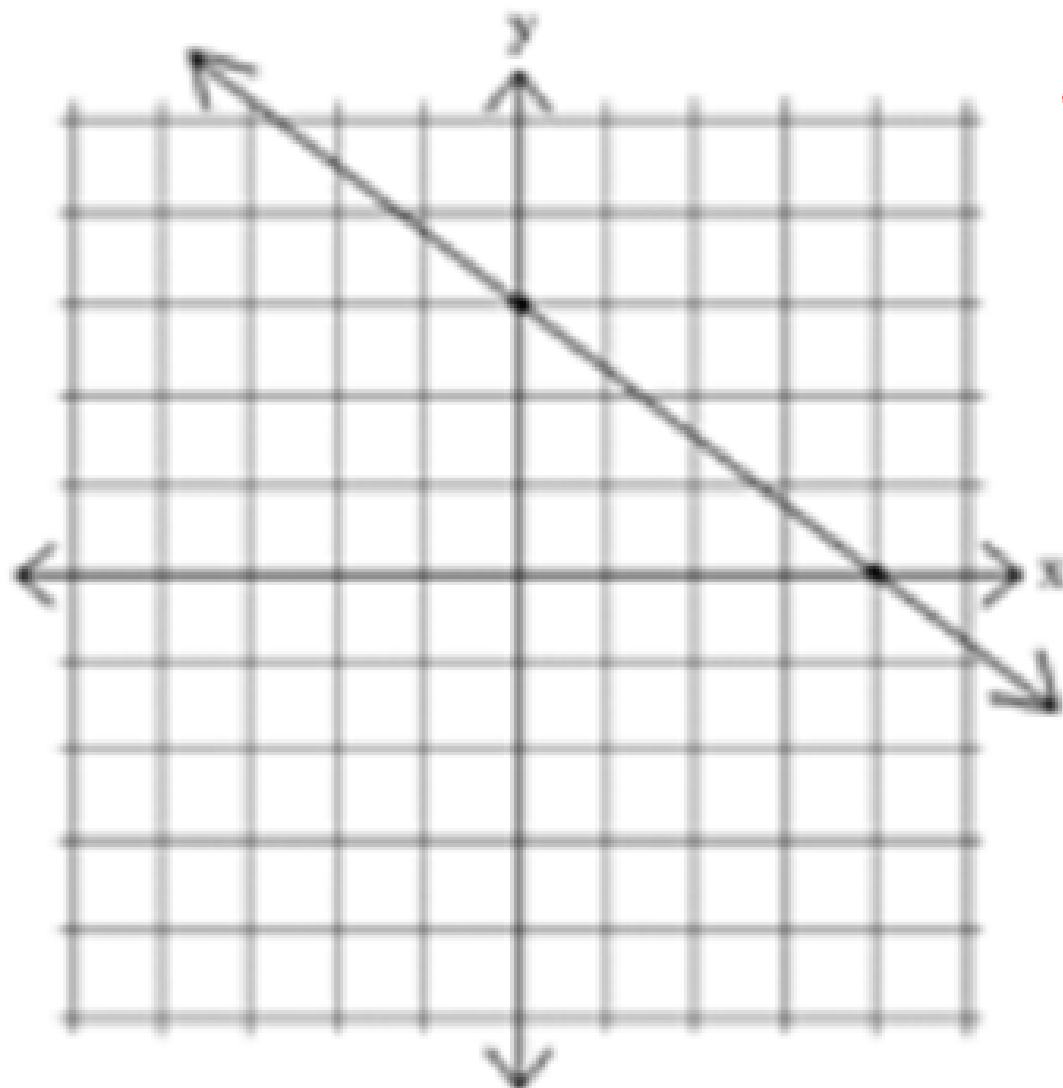
$$m=4$$

6. Option B

X (years)	Y (\$ in thousands)
1	32
2	34
3	36
4	38

Write the equation of this graph in slope-intercept form.

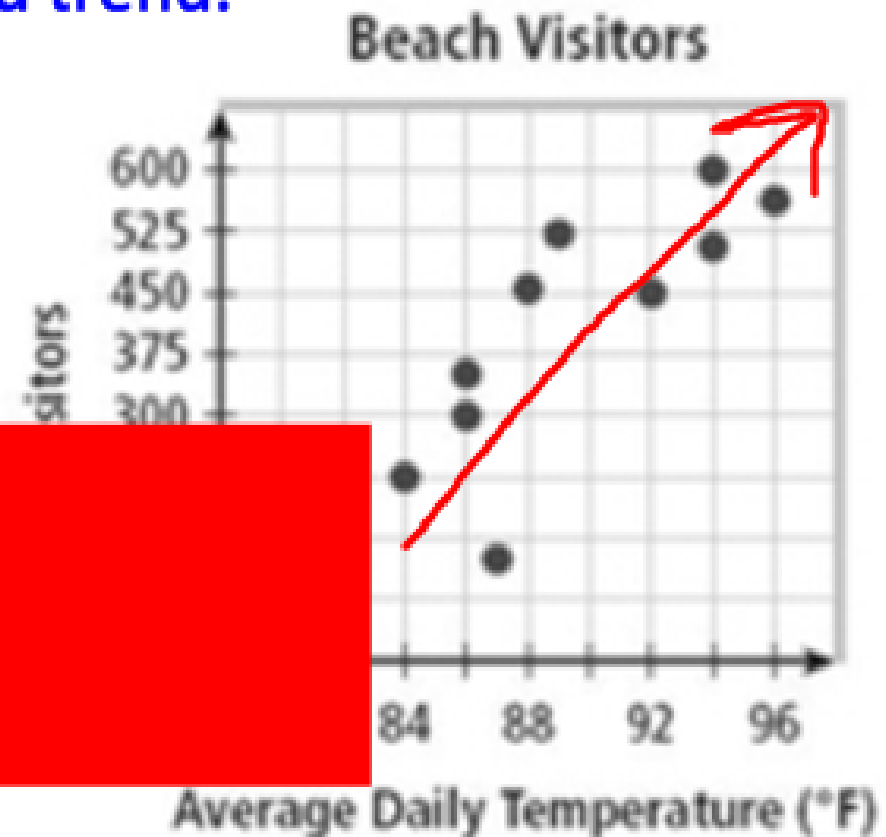
7.



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

8. Describe the correlation and trend.

positive



Which of the following is the best prediction for beach visitors in 100? heat if this trend continues?

A. 500

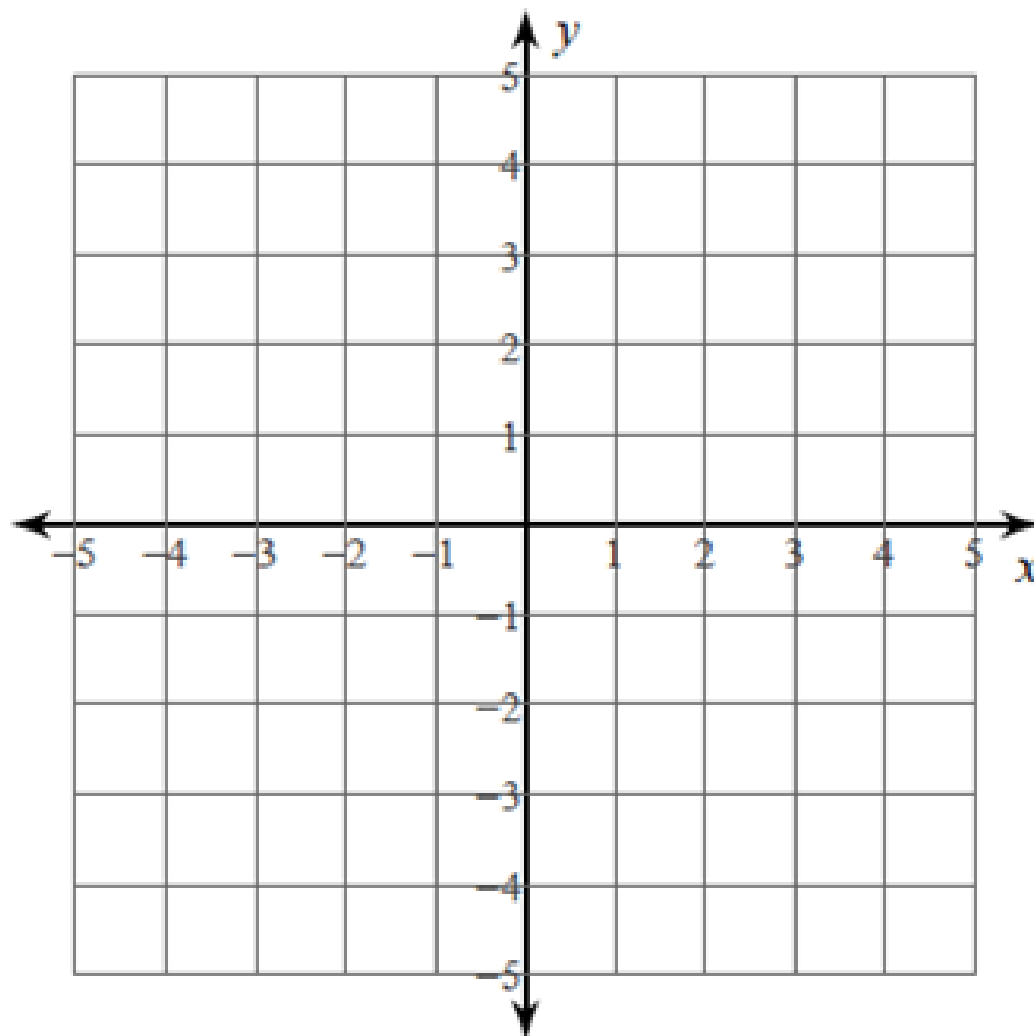
B. 550

C. 700

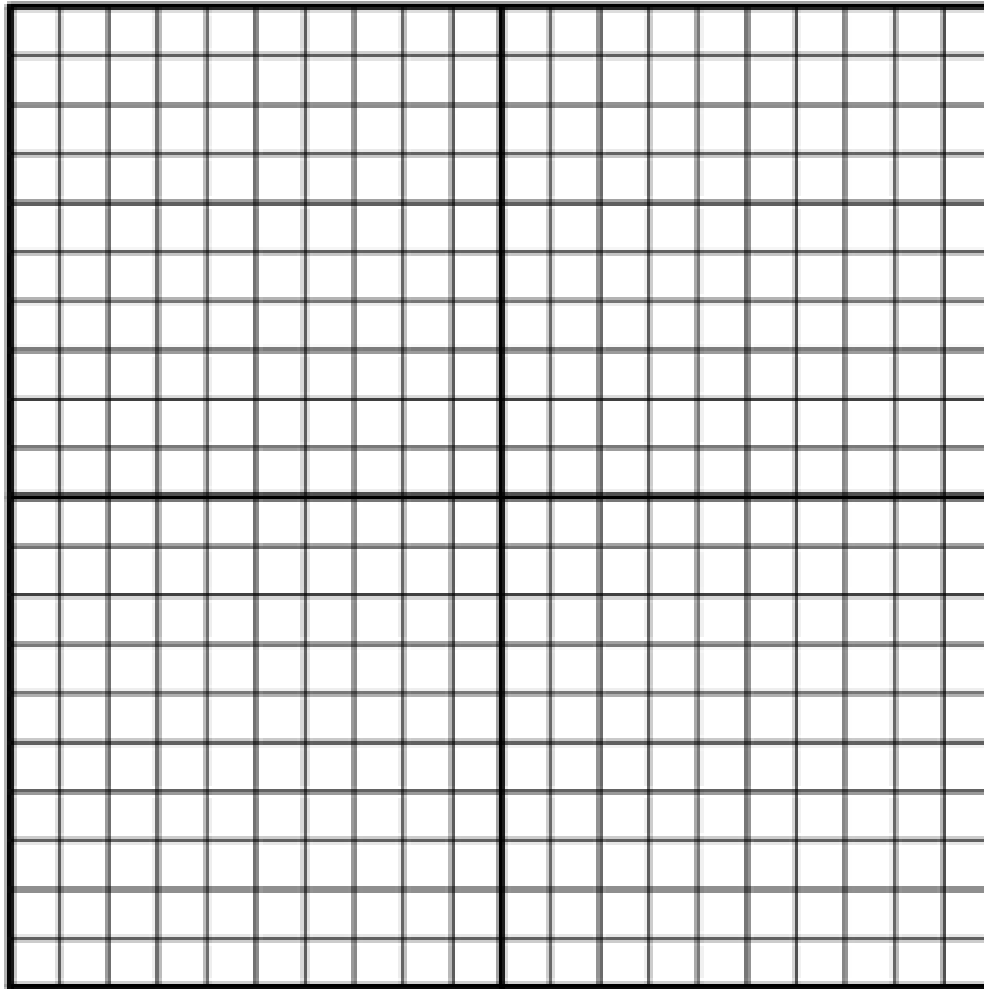
D. 850

$x = 3$ and $y = -4$

9.



$$y > \frac{1}{2}x + 6$$



If $f(x) = 2x + 3$, find each value.

$f(2)$

$$f(-1) = 2(-1) + 3 = 1$$

If $f(x) = 5 + 2x^2$, find each value.

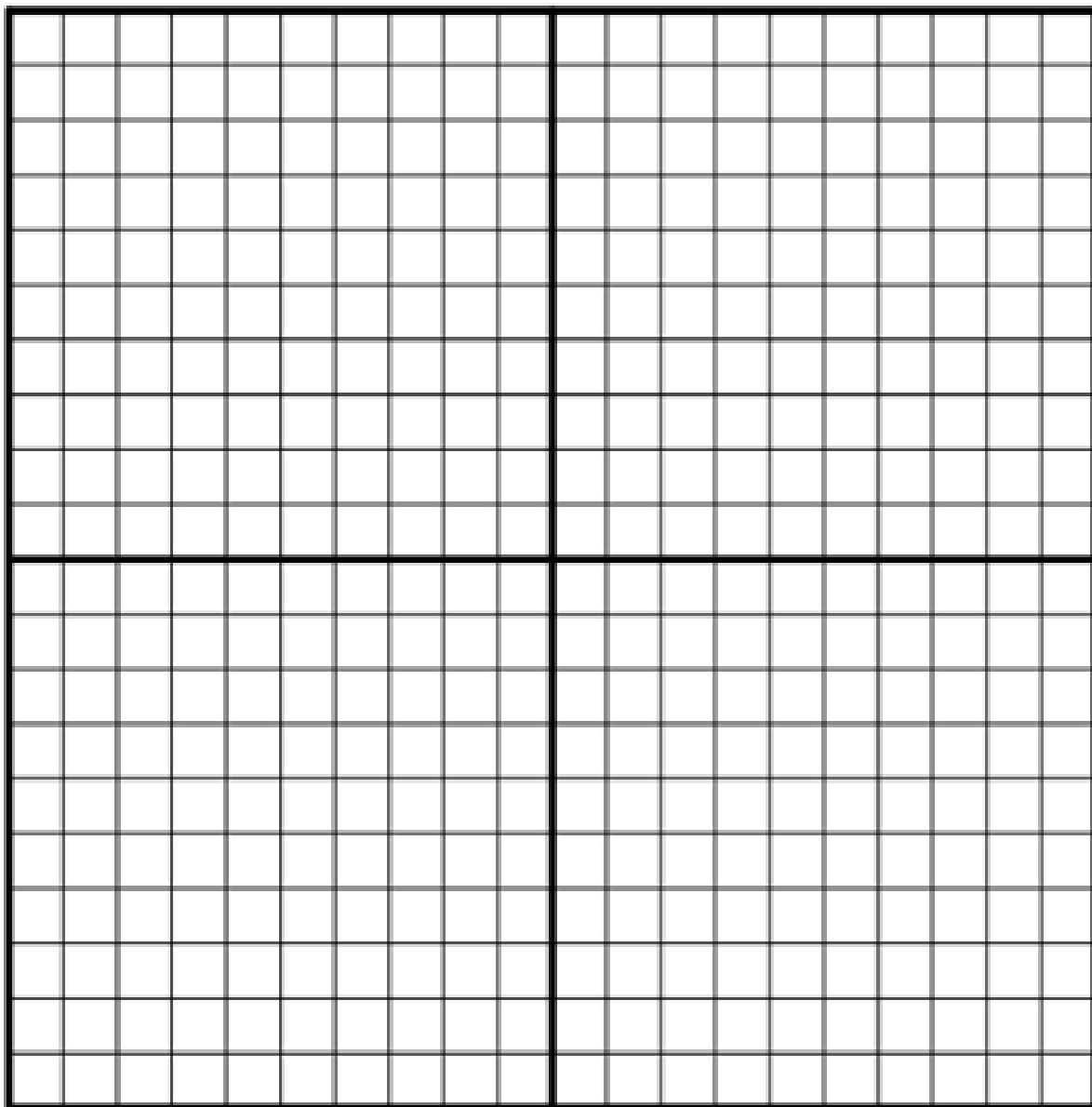
$$\begin{aligned} f(-4) &= 5 + 2(-4)^2 \\ &= 5 + 32 \\ &= 37 \end{aligned}$$

x	y
3	5
3	8
3	11
3	14
3	18

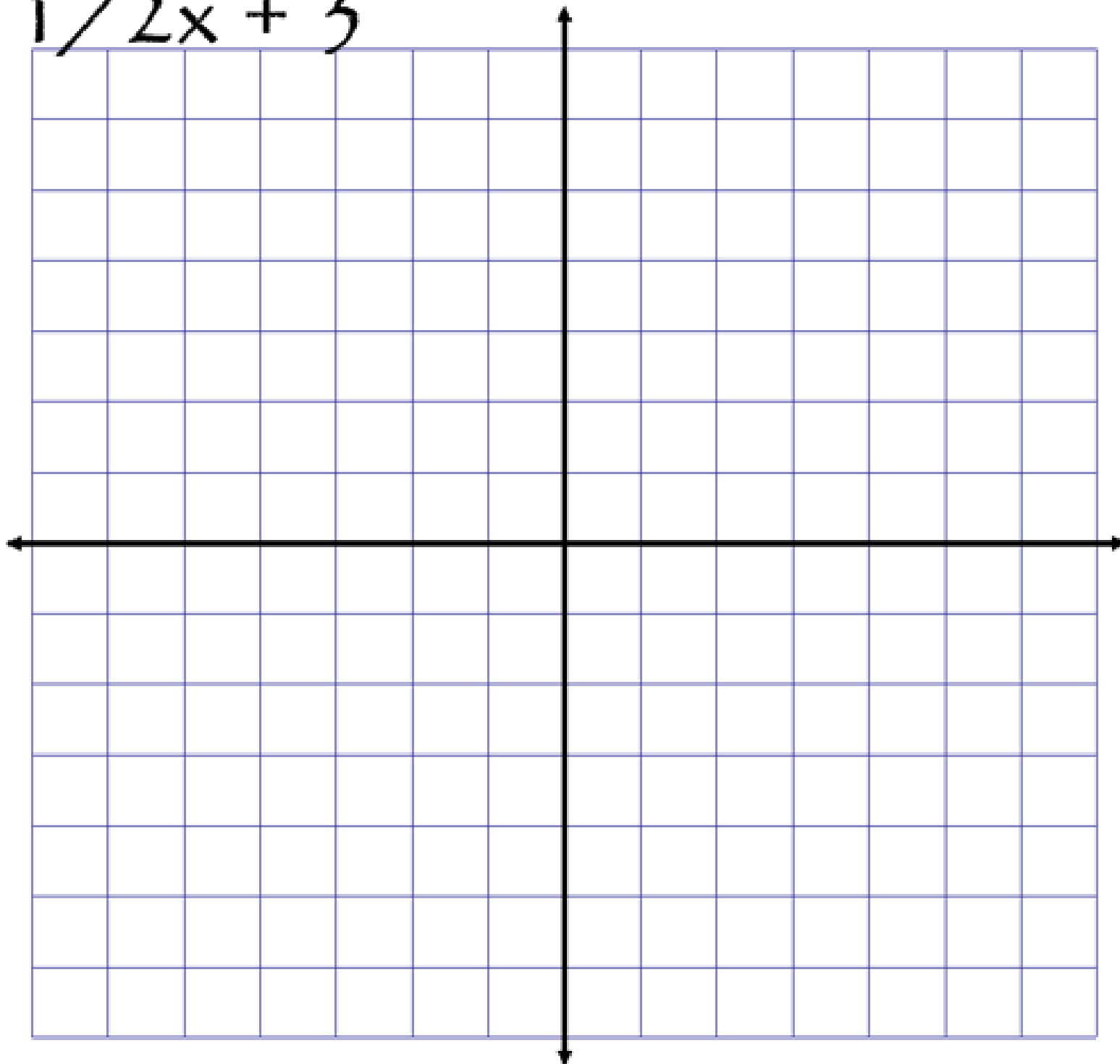
Rate of change:

Graph description:
positive, negative,
zero, or undefined?

$$y < -\frac{1}{5}x + 4$$



$$y = \frac{1}{2}x + 3$$



Write an equation in slope-intercept form for the line with the given slope and y-intercept.

$$\left[m = 1/4 \quad \text{point: } (0, 3) \right]$$

$$y = \frac{1}{4}x + 3$$

$$m = -3 \quad \text{point: } (0, 2/3)$$

What are the x & y-intercepts of this equation?

$$-x + 2y = 8$$

$$-x + 2(0) = 8$$

$$\frac{-x}{-1} = \frac{8}{-1}$$

$$x = -8$$

x-inter. $(-8, 0)$

y-inter. $(0, 4)$

$$\frac{2y}{2} = \frac{8}{2}$$

$$y = 4$$

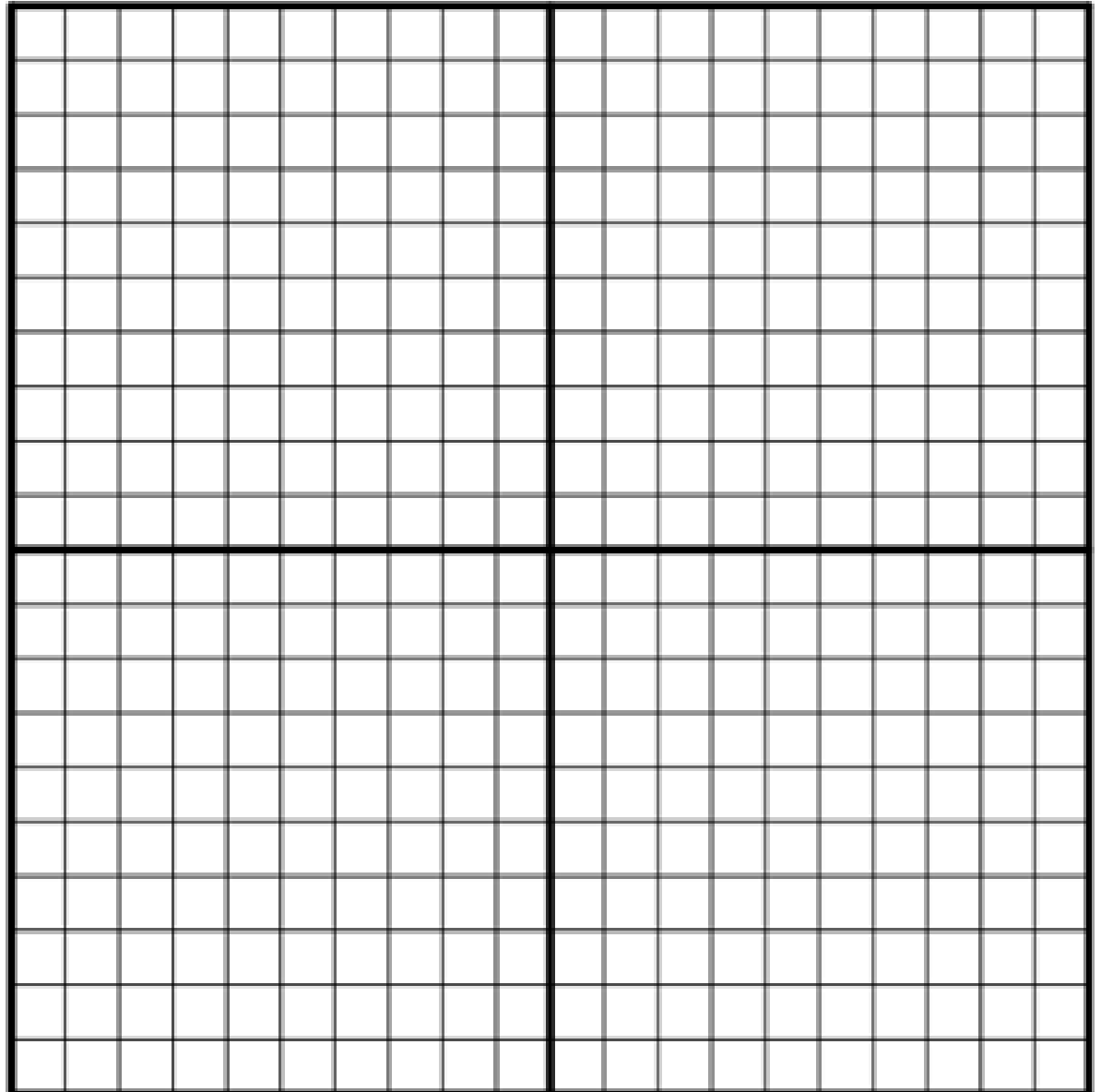
slope-intercept

graph

$$2x - 3y = -9$$

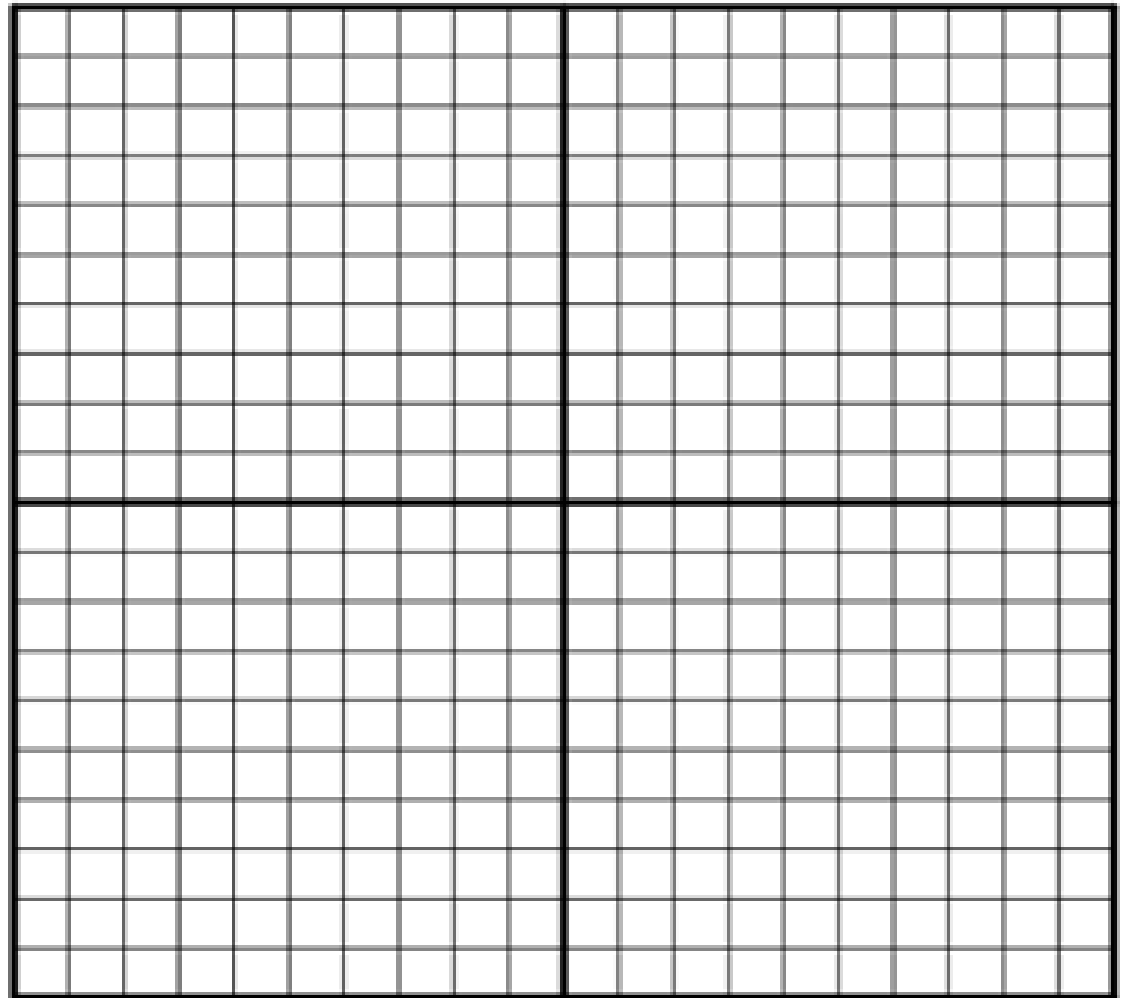
$$\frac{-3y}{-3} = \frac{-2x - 9}{-3}$$

$$y = \frac{2}{3}x + 3$$



Determine which ordered pairs are part of the solution set for each inequality. $3x + 4y < 7$

$\{(1,1), (2, -1), (-1,1), (-2,4)\}$



Write an equation in point-slope form.

$$(1, 1); (3, 2)$$

Now rewrite that equation in slope-intercept form

Write an equation in **slope-intercept form** for the line that passes through $(4, -1)$ and is parallel to the graph of $y = \frac{1}{4}x + 7$

Determine whether the graphs of the following equations are parallel or perpendicular. Explain.

$$y = -2x, 2y = x, 4y = 2x + 4$$

$$y = -2x$$

perpendicular

$$2y = x$$

$$y = \frac{1}{2}x$$

$$\frac{4y}{4} = \frac{2x + 4}{4}$$

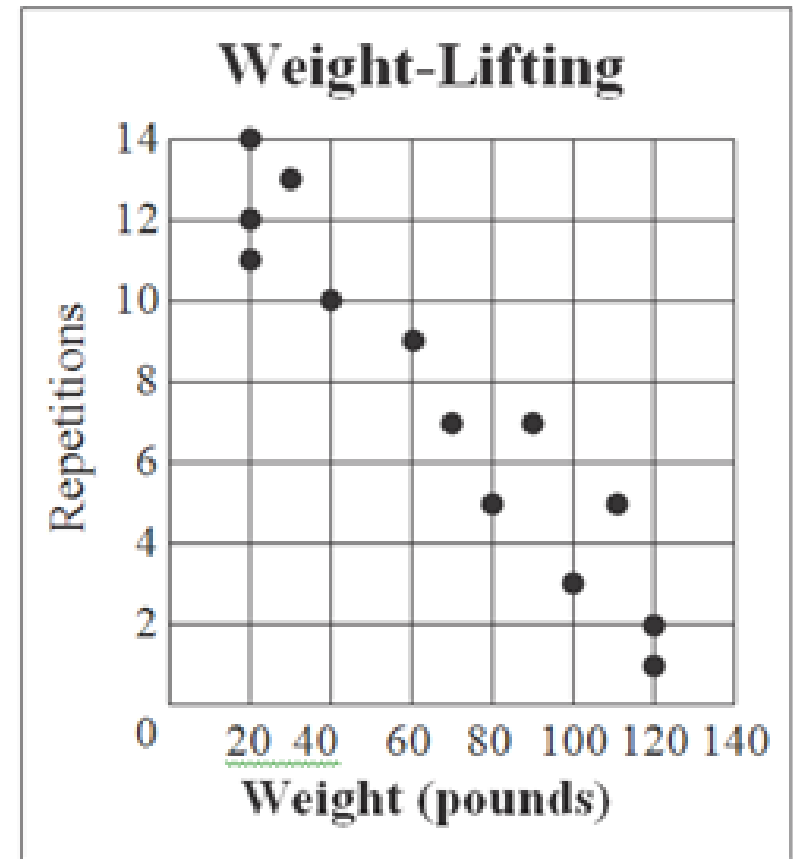
$$y = \frac{1}{2}x + 1$$

parallel

Write an equation in **slope-intercept form** for the line that passes through $(-4,6)$ and is perpendicular to the graph of $2x + 3y = 12$.

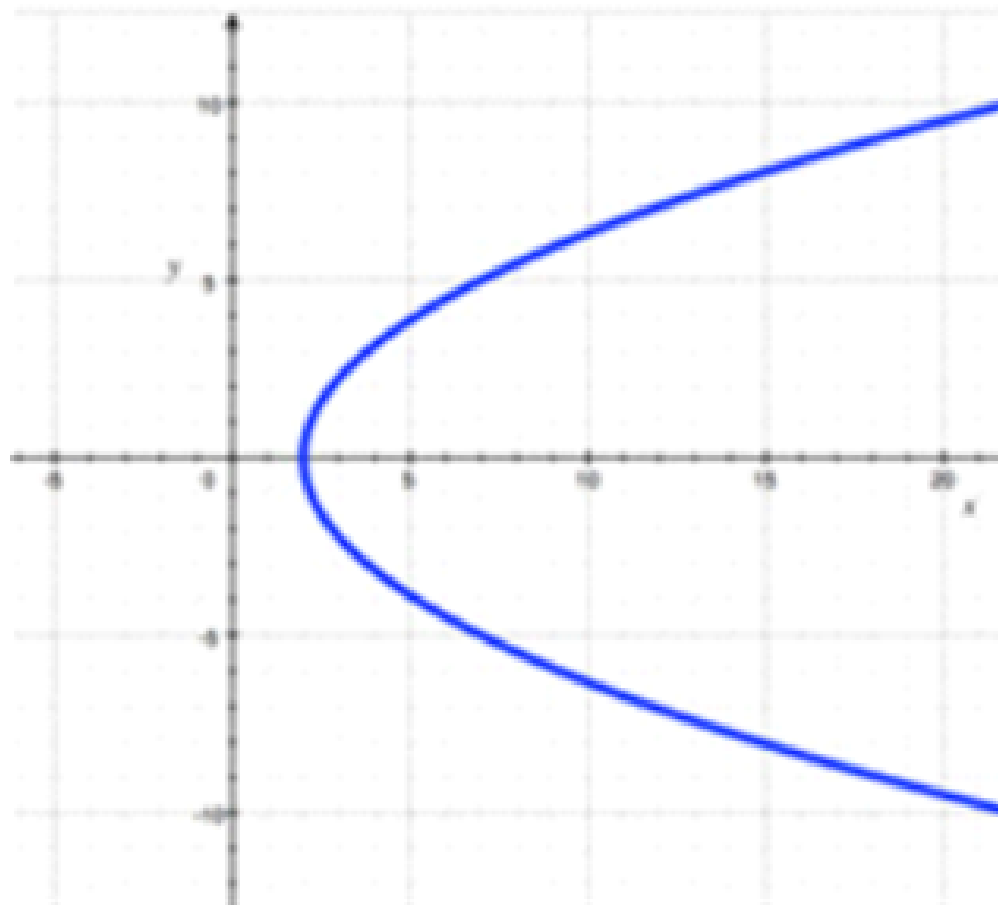
What type of correlation?

What is the trend?



Draw a line of best fit?

$$x = 2y^2 + 2$$



Is this a function???

Alicia is planning her wedding. She needs to buy tablecloths and burlap for the tables. She wants to spend \$327 on the tables. The tablecloths cost \$11 each and the burlap cost \$9 each .

- a) Write an equation representing this situation.
- b) If Alicia decides to buy 18 pieces of burlap, how many tablecloths can she buy?

x	y
-4	10
-1	9
2	8
5	7
8	6

Find the slope.

Graph.

Describe the graph.

Domain?

Range?