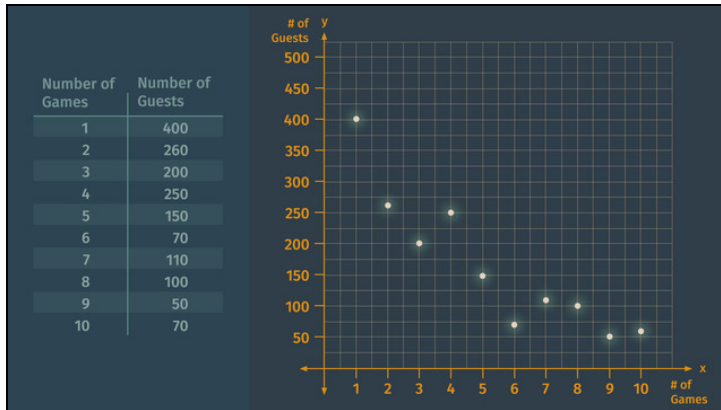




Printable Worksheets from [sofatutor.com](https://www.sofatutor.com)

Scatter plots



- 1 Determine the slope-intercept form of the line of best fit.
 - 2 Summarize your knowledge about scatter plots.
 - 3 Interpret the different scatter plots.
 - 4 Draw a scatter plot.
 - 5 Interpret the given scatter plot.
 - 6 Explain what kind of data you can represent in a scatter plot.
- + with lots of tips, answer keys, and detailed answer explanations for all of the problems.

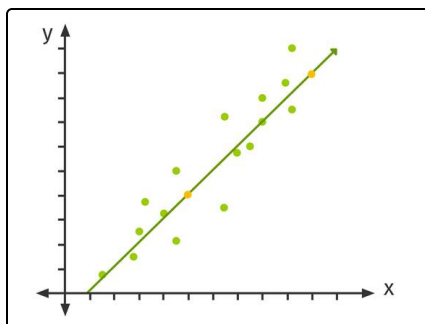


The complete package, including all problems, hints, answers, and detailed answer explanations is available for all [sofatutor.com](https://www.sofatutor.com) subscribers.



Determine the slope-intercept form of the line of best fit.

Choose the correct formula.



This diagram shows the impact of DJ's popularity rating (x -axis) on the number of guests attending (y -axis).

The yellow points on the line represent a DJ with a 50% popularity rating having 200 guests in attendance, and one with 80% popularity leads to 350 guests.

A

$$y = -50x + 5$$

B

$$y = 50x + 200$$

C

$$y = 5x - 50$$

D

$$y = 5x + 200$$

E

$$y = 80x + 350$$

F

$$y = 5x - 80$$



Hints for solving these problems

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of 6

Determine the slope-intercept form of the line of best fit.

Hint #1

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

Use this formula to find the slope.

Hint #2

Use the slope-intercept form of a line ($y = mx + b$) to find the b term by plugging in either point as x and y .

Hint #3

"DJ with a 50% popularity rating has 200 guests in attendance" can be represented by the ordered pair $(50, 200)$.

Hint #4

"DJ with 80% popularity leads to 350 guests" can be represented with the ordered pair $(80, 350)$.

Hint #5

$(50, 200)$ this point gives us $x_1 = 50$ and $y_1 = 200$.

$(80, 350)$ this point gives us $x_2 = 80$ and $y_2 = 350$.

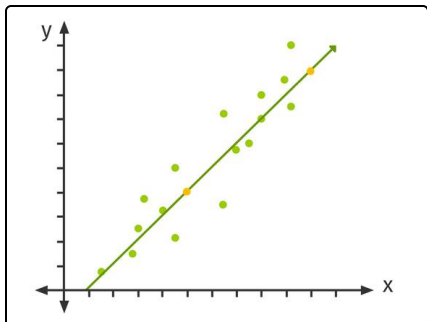


Answers and detailed answer explanations for these problems

1
of 6

Determine the slope-intercept form of the line of best fit.

Answer key: C



Any linear equation can be expressed in slope intercept form as $y = mx + b$.

1. We first determine the slope m by the formula:

- $m = \frac{y_2 - y_1}{x_2 - x_1}$.

- So we need two points. Those are given by the information of the impact of 50% (80%) popularity rating on the number of guests 200 (350).

- So we have two points $(50, 200)$ and $(80, 350)$. Now we put the coordinates of those points in the formula above to get

- $m = \frac{350 - 200}{80 - 50} = \frac{150}{30} = 5$.

2. This gives us $y = 5x + b$ with an unknown y-intercept. Last we put the coordinates of one point into this equation. We picked to use the point $(50, 200)$ and it looks like:

- $200 = 5(50) + b$.

- Subtracting 250 results in the y-intercept $b = 200 - 250 = -50$.

3. So, the linear equation is $y = 5x - 50$.