TODAY'S AGENDA: November 4th

> Quarterly Exam Nov. 9 & 10

- Whole Class Lesson Today
  > Log In and Take Notebook Out

- Today's Objective:
  > Students will be able to determine the Equation of the Line of Best Fit

- Today's Standard:
  > Summarize, represent and interpret data on a single count or measurement variable.
  > Interpret Linear Models

Estimating Equation for Line of Best Fit

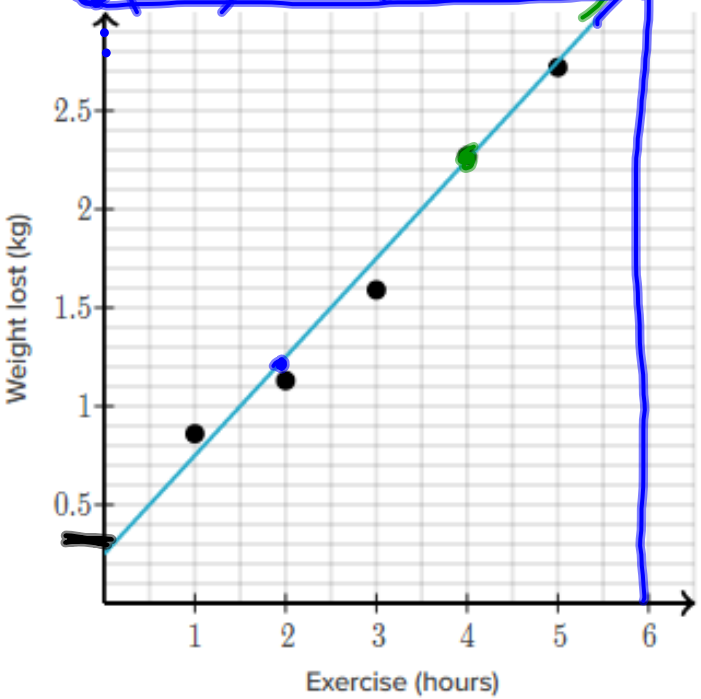
$$y = mx + b$$

m: Slope

b: y-intercept

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

Arthur wanted to investigate how the amount he exercises impacts his weight loss. Each week he recorded the number of hours he exercised and the amount of weight he lost that week (in kilograms). A line was fit to the data to model the relationship.



Which of these linear equations best describes the given model?

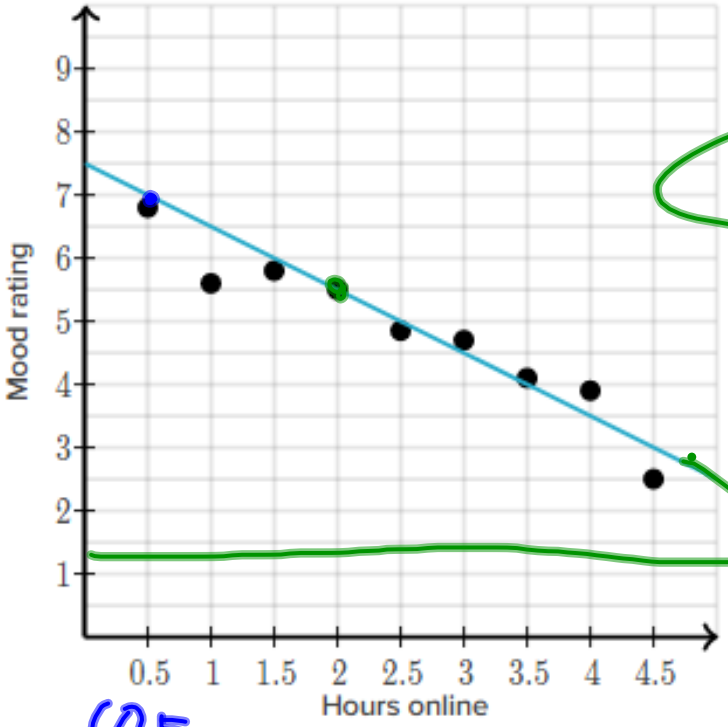
- $y = x + 0.25$
- $y = x + 0.5$
- $y = 0.5x + 0.25$
- $y = 0.5x + 0.5$

Based on this equation, estimate Arthur's weight loss in a week where he exercises for 6 hours.

Round your answer to the nearest hundredth.

kg

Jacob distributed a survey to his fellow students asking them how many hours they spent on the Internet in the past day. He also asked them to rate their mood on a scale from 0 to 10, with 10 being the happiest. A line was fit to the data to model the relationship.



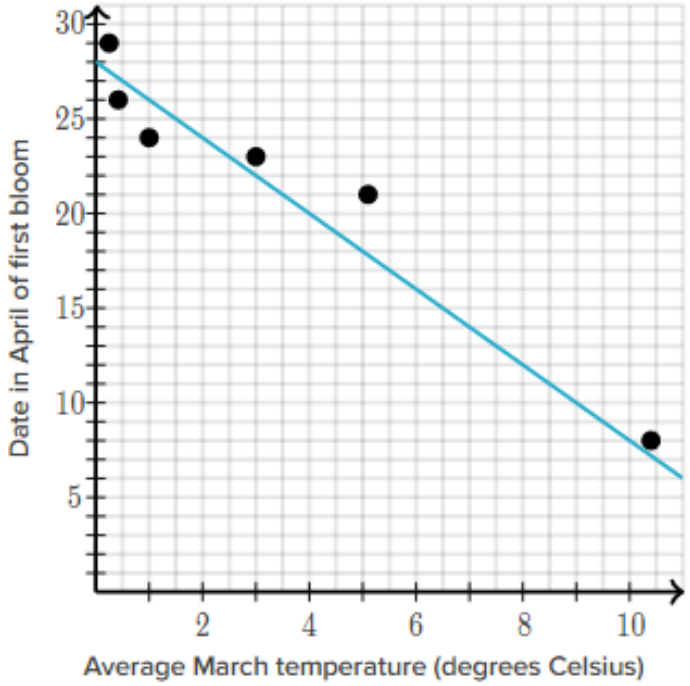
Which of these linear equations best describes the given model?

- $y = x + 7.5$
- $y = -x + 7.5$
- $y = -\frac{1}{2}x + 7.5$

Based on this equation, estimate the mood rating for a student that spent 5.5 hours online.

$\frac{7-5.5}{0.5-2} = \frac{1.5}{-1.5} = -1$

Tess plants flowers every year, and she noticed that her flowers tend to bloom earlier when the spring weather is warmer. She collected data for the past 6 years on the average March temperature where she lives, and the date in April her first flowers bloomed that year. A line was fit to the data to model the relationship.



Which of these linear equations best describes the given model?

- $y = -x + 28$
- $y = x + 28$
- $y = -2x + 28$
- $y = 2x + 28$

Based on this equation, estimate the date in April her flowers will bloom if the average temperature in March is $5.5°\text{C}$.

Round your answer to the nearest whole number.

[ ] of April