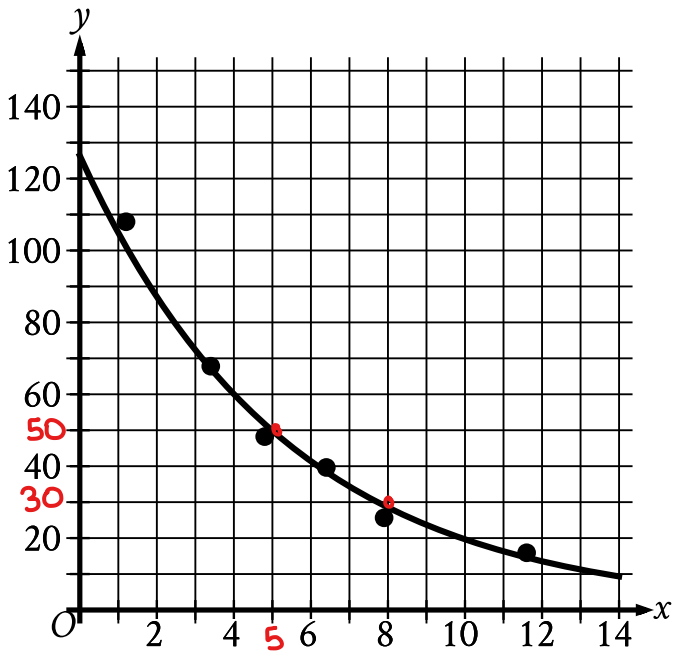


Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Problem-Solving and Data Analysis	Two-variable data: Models and scatterplots	Hard

ID: 3ee345a1



Desmos
(5, 50), (8, 30)
 $y = 117(\underline{0.84})^x$
 $\approx 0.83 //$

The scatterplot shows the relationship between two variables, x and y . An equation for the exponential model shown can be written as $y = a(b)^x$, where a and b are positive constants. Which of the following is closest to the value of b ?

- ~~A. 0.83~~
- B. 1.83
- C. 18.36
- D. 126.35

Question ID 0a975aa5

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Problem-Solving and Data Analysis	Two-variable data: Models and scatterplots	Hard

ID: 0a975aa5

Unit 1 Topic 2

For $x > 0$, the function f is defined as follows:

$f(x)$ equals 201% of x

Which of the following could describe this function?

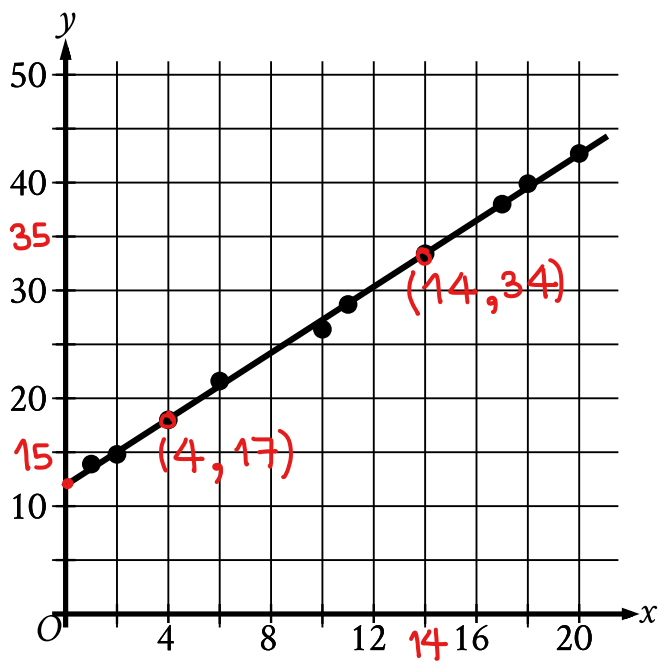
$y = 2.01x$

- ~~A. Decreasing exponential~~
- ~~B. Decreasing linear~~
- ~~C. Increasing exponential~~
- ~~D. Increasing linear~~

Question ID dc8ef67e

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Problem-Solving and Data Analysis	Two-variable data: Models and scatterplots	Hard

ID: dc8ef67e



Y-intercept $\approx 12(3.9) = 46.8$
Slope $= \frac{34(3.9) - 17(3.9)}{14 - 10}$
 $= 6.63$
 $\approx 5.9 //$

The scatterplot shows the relationship between two variables, x and y , for data set E. A line of best fit is shown. Data set F is created by multiplying the y-coordinate of each data point from data set E by 3.9. Which of the following could be an equation of a line of best fit for data set F?

- ~~A. $y = 46.8 + 5.9x$~~ $\rightarrow$ F
- B. $y = 46.8 + 1.5x$
- C. $y =$ ~~12~~ $+ 5.9x$
- D. $y = 12 + 1.5x$ $\rightarrow$ E

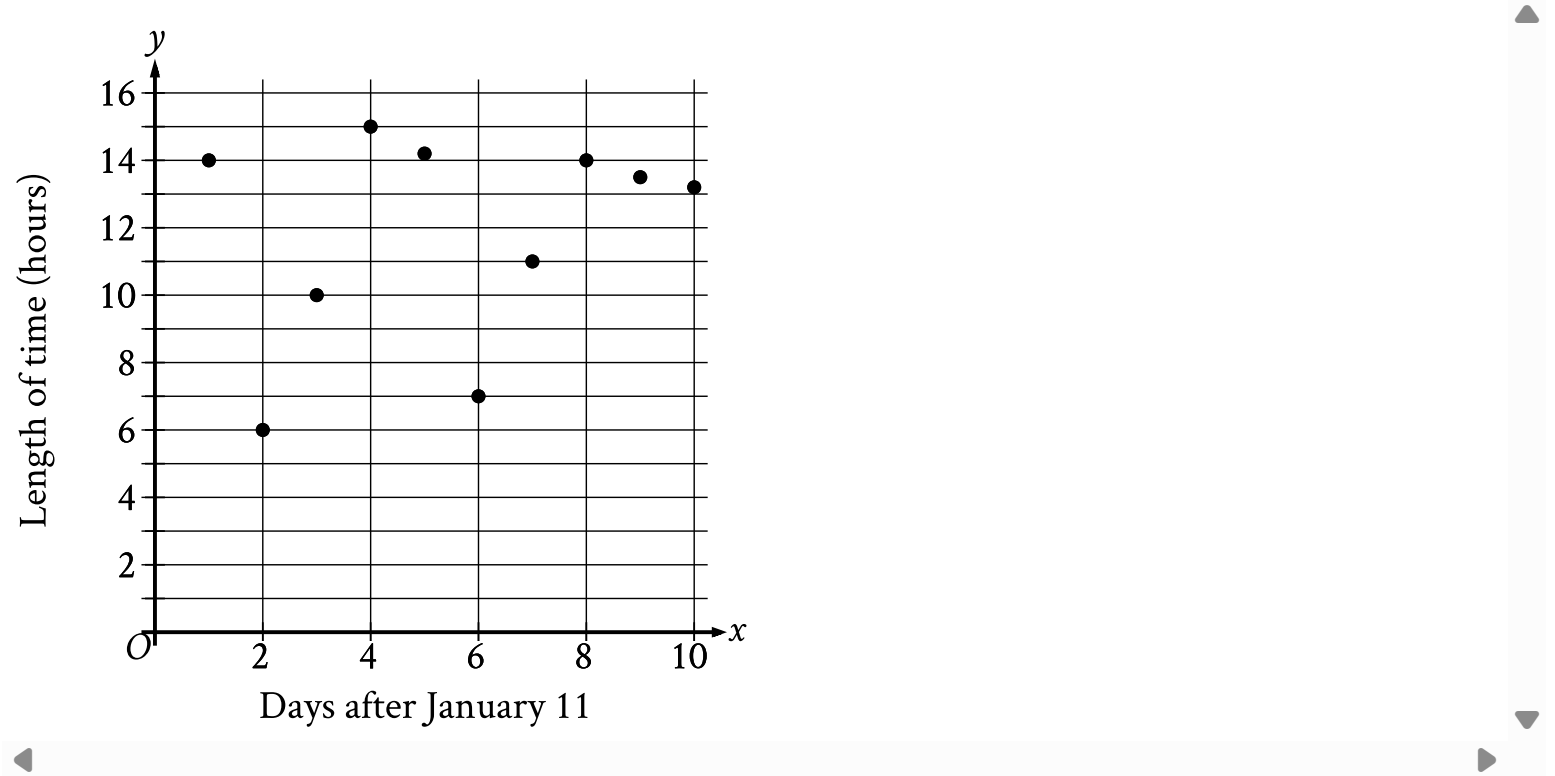
Question ID 6a61db85

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Problem-Solving and Data Analysis	Two-variable data: Models and scatterplots	Hard

ID: 6a61db85



The scatterplot shows the relationship between the length of time y , in hours, a certain bird spent in flight and the number of days after January 11, x .



What is the average rate of change, in hours per day, of the length of time the bird spent in flight on January 13 to the length of time the bird spent in flight on January 15?