

Question ID 1e42e80a

Assessment	Test	Domain	Skill	Difficulty
PSAT/NMSQT & PSAT 10	Math	Problem-Solving and Data Analysis	Two-variable data: Models and scatterplots	<div><div></div><div></div><div></div></div>

ID: 1e42e80a

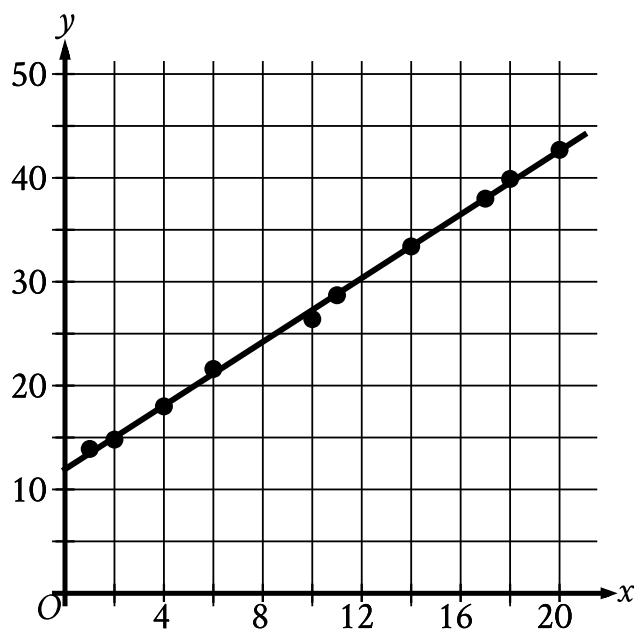
Each year, the value of an investment increases by **0.49%** of its value the previous year. Which of the following functions best models how the value of the investment changes over time?

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

Question ID 14baeb51

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ID: 14baeb51



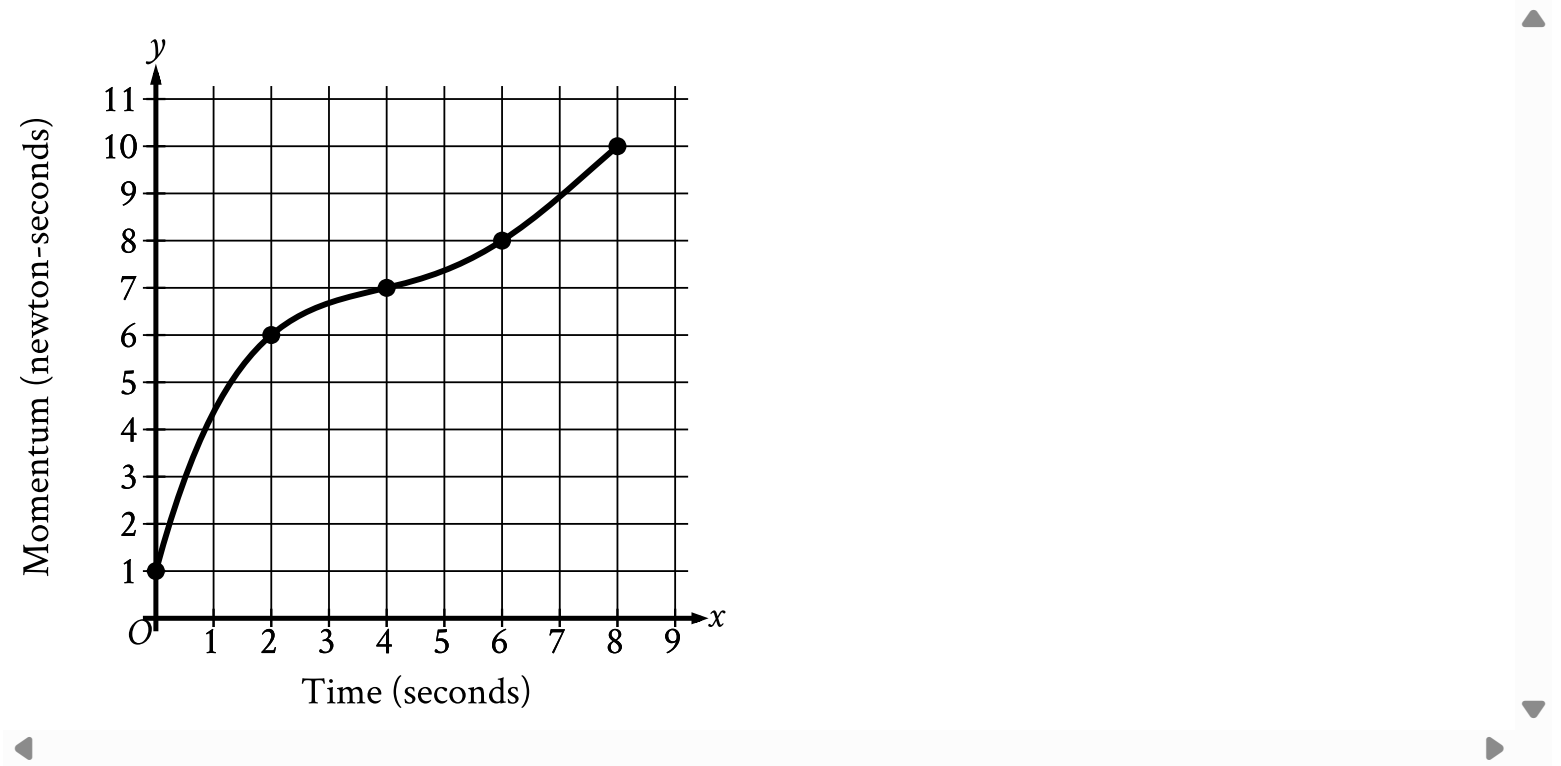
The scatterplot shows the relationship between two variables, x and y , for data set E. A line of best fit is shown. Data set F is created by multiplying the y -coordinate of each data point from data set E by **3.9**. Which of the following could be an equation of a line of best fit for data set F?

- A. $y = 46.8 + 5.9x$
- B. $y = 46.8 + 1.5x$
- C. $y = 12 + 5.9x$
- D. $y = 12 + 1.5x$

Question ID 8f250149

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ID: 8f250149



The graph shows the momentum y , in newton-seconds, of an object x seconds after the object started moving, for $0 \leq x \leq 8$. What is the average rate of change, in newton-seconds per second, in the momentum of the object from $x = 2$ to $x = 6$?

Question ID 9cd1e599

Assessment	Test	Domain	Skill	Difficulty
PSAT/NMSQT & PSAT 10	Math	Problem-Solving and Data Analysis	Two-variable data: Models and scatterplots	<div><div></div><div></div><div></div></div>

ID: 9cd1e599

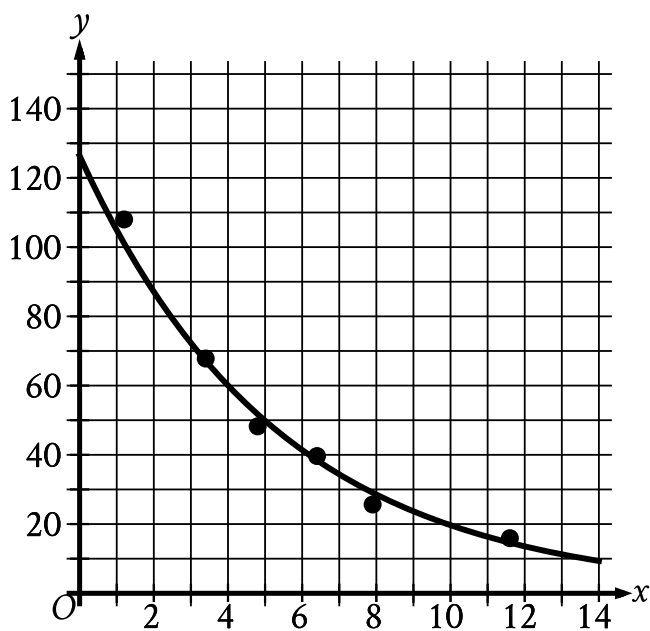
For $x > 0$, the function f is defined as follows:
 $f(x)$ equals 201% of x
Which of the following could describe this function?

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

Question ID a900a374

Assessment	Test	Domain	Skill	Difficulty
PSAT/NMSQT & PSAT 10	Math	Problem-Solving and Data Analysis	Two-variable data: Models and scatterplots	<div><div></div><div></div><div></div></div>

ID: a900a374



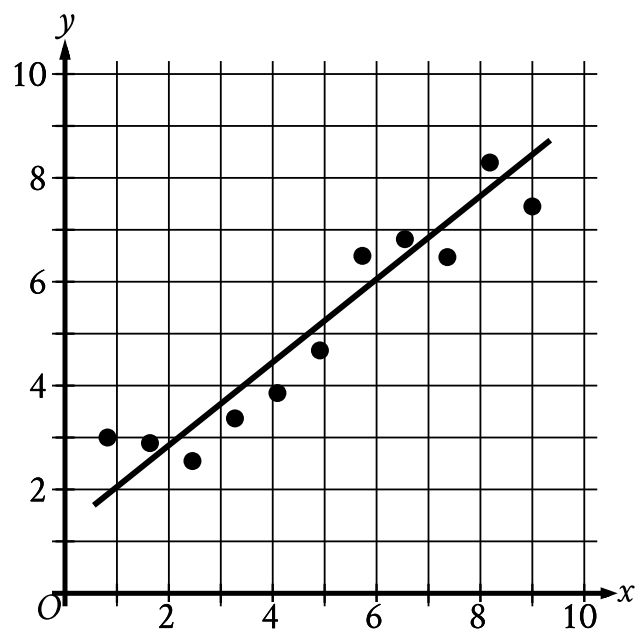
The scatterplot shows the relationship between two variables, x and y . An equation for the exponential model shown can be written as $y = a(b)^x$, where a and b are positive constants. Which of the following is closest to the value of b ?

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

Question ID b9f9a101

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PSAT/NMSQT & PSAT 10	Math	Problem-Solving and Data Analysis	Two-variable data: Models and scatterplots	<div><div></div><div></div><div></div></div>

ID: b9f9a101



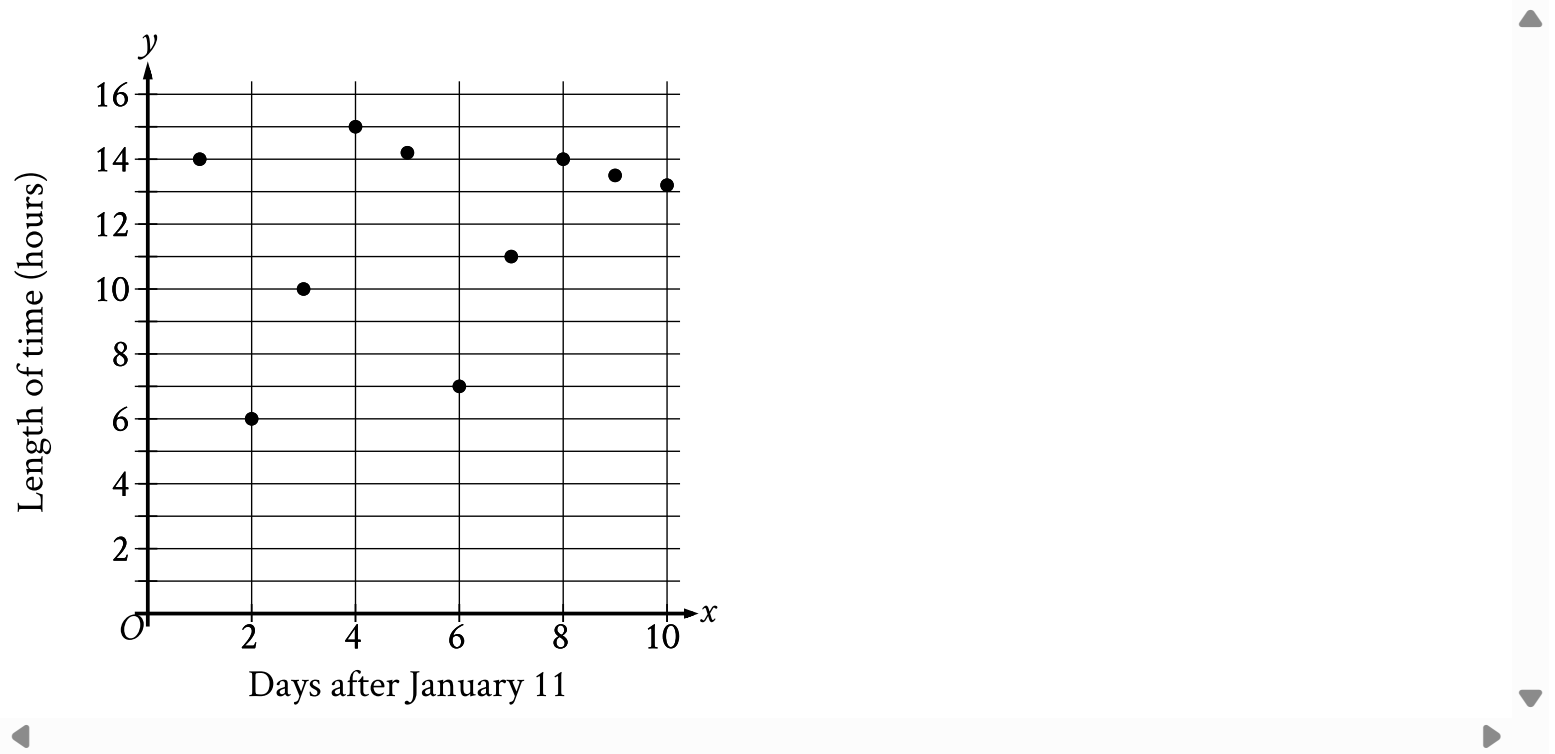
The scatterplot shows the relationship between two variables, x and y . A line of best fit is also shown. For how many of the 11 data points does the line of best fit predict a greater y -value than the actual y -value?

Question ID f96ee12b

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ID: f96ee12b

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?