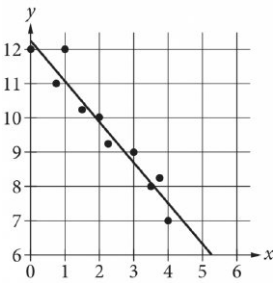
Question ID 1adb39f0

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

ID: 1adb39f0

2.1

The scatterplot shows the relationship between two variables, *x* and *y*. A line of best fit for the data is also shown. Which of the following is closest to the difference between the *y*-coordinate of the data point with $x = 1$ and the *y*-value predicted by the line of best fit at $x = 1$?



A. 1

B. 2

C. 5

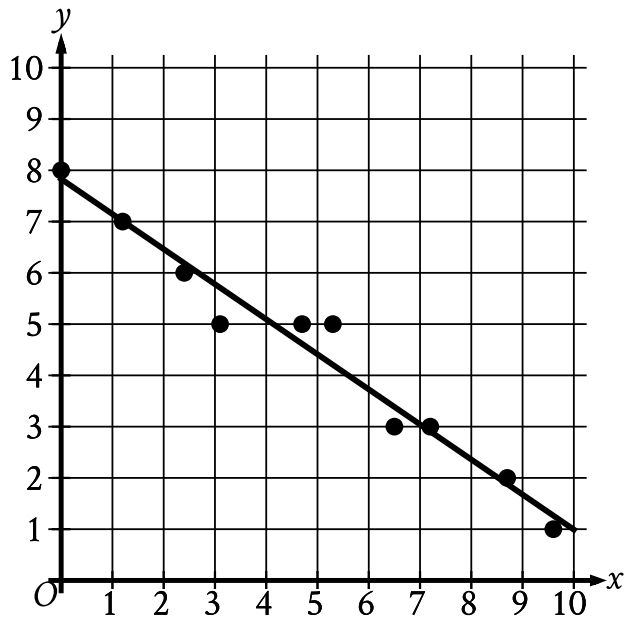
D. 12

Question ID 2e74e403

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

ID: 2e74e403 2.2

In the given scatterplot, a line of best fit for the data is shown.



Which of the following is closest to the slope of this line of best fit?

A. 7

B. 0.7

C. -0.7

D. -7

Question ID 9a144a01

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

ID: 9a144a01

2.3

Which of the following is true about the values of 2^x and $2x+2$ for $x>0$?

A. For all $x>0$, it is true that $2^x<2x+2$.

B. For all $x>0$, it is true that $2^x>2x+2$.

C. There is a constant c such that if $0<x<c$, then $2^x<2x+2$, but if $x>c$, then $2^x>2x+2$.

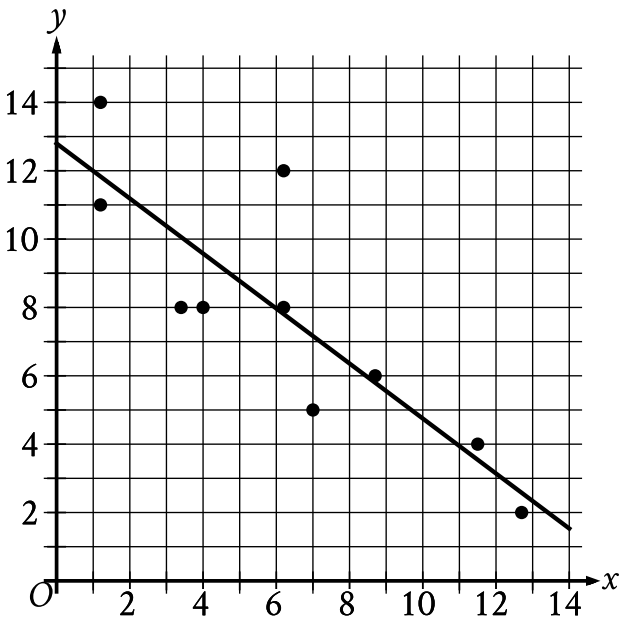
D. There is a constant c such that if $0<x<c$, then $2^x>2x+2$, but if $x>c$, then $2^x<2x+2$.

Question ID 03a16790

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

ID: 03a16790 2.4

The scatterplot shows the relationship between two variables, x and y. A line of best fit is also shown.



Which of the following is closest to the slope of the line of best fit shown?

A. -2.4

B. -0.8

C. 0.8

D. 2.4

Question ID 7ac5d686

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

ID: 7ac5d686

2.5

An inspector begins a day of work with a large sample of shirts that need to be checked for defects. The inspector works at a constant rate throughout the morning. What type of model is best to model the number of shirts remaining to be checked for defects at any given time throughout the morning?

A. A linear model with a positive slope

B. A linear model with a negative slope

C. An exponential growth model

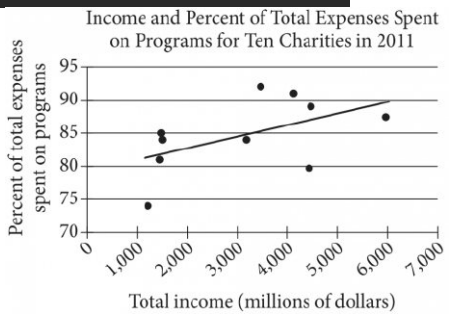
D. An exponential decay model

Question ID 7fd284ac

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

ID: 7fd284ac

2.6



The scatterplot above shows data for ten charities along with the line of best fit. For the charity with the greatest percent of total expenses spent on programs, which of the following is closest to the difference of the actual percent and the percent predicted by the line of best fit?

A. 10%

B. 7%

C. 4%

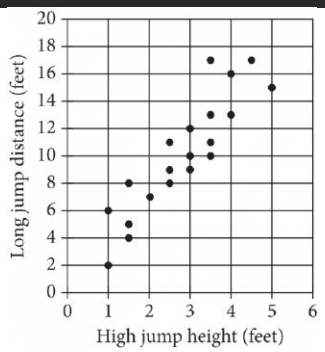
D. 1%

Question ID 3d985614

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

ID: 3d985614

2.7



Each dot in the scatterplot above represents the height x, in feet, in the high jump, and the distance y, in feet, in the long jump, made by each student in a group of twenty students. The graph of which of the following equations is a line that most closely fits the data?

A. $y = 0.82x + 3.30$

B. $y = 0.82x - 0.82$

C. $y = 3.30x + 0.82$

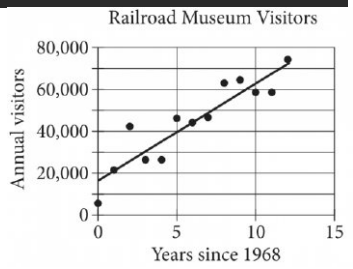
D. $y = 3.30x - 3.30$

Question ID 3c5b19ef

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

ID: 3c5b19ef

2.8



The scatterplot above shows the number of visitors to a railroad museum in Pennsylvania each year from 1968 to 1980, where t is the number of years since 1968 and n is the number of visitors. A line of best fit is also shown. Which of the following could be an equation of the line of best fit shown?

A. $n = 16{,}090 + 4{,}680t$

B. $n = 4{,}690 + 16{,}090t$

C. $n = 16{,}090 + 9{,}060t$

D. $n = 9{,}060 + 16{,}090t$

Question ID ab7740a8

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

ID: ab7740a8

2.9

In which of the following tables is the relationship between the values of x and their corresponding y-values nonlinear?

A.

x	1	2	3	4
y	8	11	14	17

B.

x	1	2	3	4
y	4	8	12	16

C.

x	1	2	3	4
y	8	13	18	23

D.

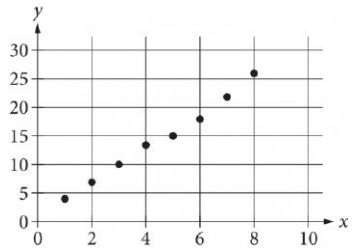
x	1	2	3	4
y	6	12	24	48

Question ID 9eb896c5

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

ID: 9eb896c5

2.10



Which of the following could be the equation for a line of best fit for the data shown in the scatterplot above?

A. $y = 3x + 0.8$

B. $y = 0.8x + 3$

C. $y = -0.8x + 3$

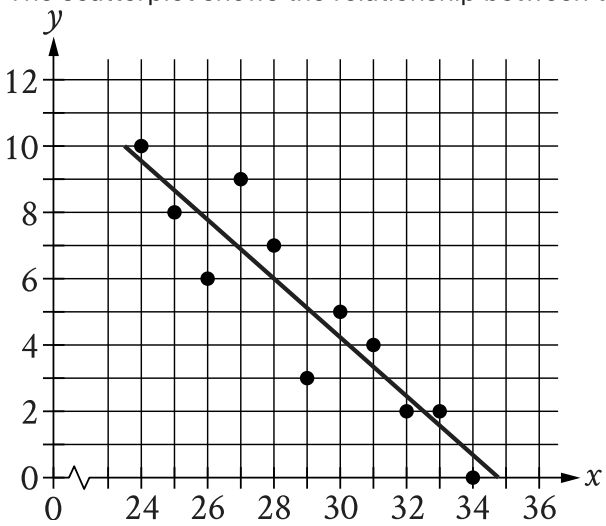
D. $y = -3x + 0.8$

Question ID fdfc90e4

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

ID: fdfc90e4 2.11

The scatterplot shows the relationship between two variables, x and y. A line of best fit for the data is also shown.



At $x = 32$, which of the following is closest to the y-value predicted by the line of best fit?

A. 0.4

B. 1.5

C. 2.4

D. 3.3

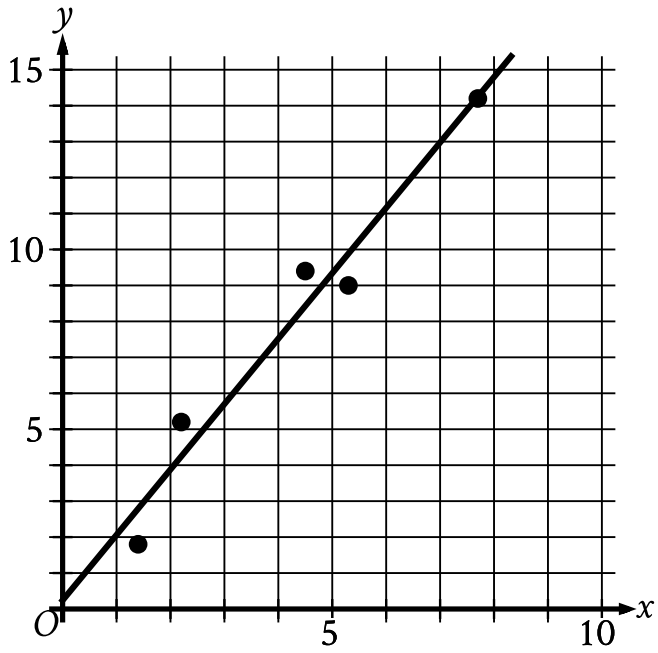
Question ID 4cc05491

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

ID: 4cc05491

2.12

In the given scatterplot, a line of best fit for the data is shown.



Which of the following is closest to the slope of the line of best fit shown?

A. 0.2

B. 0.7

C. 1.8

D. 2.6

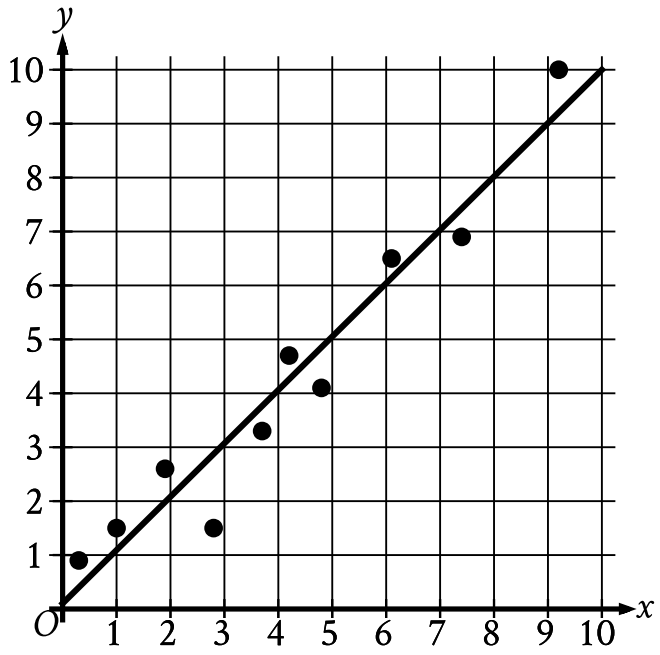
Question ID e17babed

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

ID: e17babed

2.13

The scatterplot shows the relationship between two variables, x and y. A line of best fit for the data is also shown.



For how many of the 10 data points is the actual *y*-value greater than the *y*-value predicted by the line of best fit?

A. 3

B. 4

C. 6

D. 7