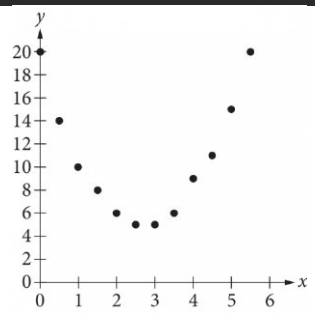
Question ID 82aaa0a1

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

ID: 82aaa0a1

1.1



Of the following, which is the best model for the data in the scatterplot?

A. $y = 2x^2 - 11x - 20$

B. $y = 2x^2 - 11x + 20$

C. $y = 2x^2 - 5x - 3$

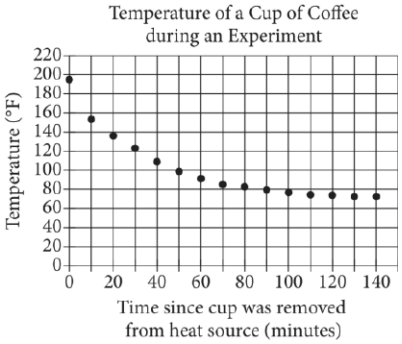
D. $y = 2x^2 - 5x + 3$

Question ID 83272c51

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

ID: 83272c51

1.2



In an experiment, a heated cup of coffee is removed from a heat source, and the cup of coffee is then left in a room that is kept at a constant temperature. The graph above shows the temperature, in degrees Fahrenheit (°F), of the coffee immediately after being removed from the heat source and at 10-minute intervals thereafter. During which of the following 10-minute intervals does the temperature of the coffee decrease at the greatest average rate?

A. Between 0 and 10 minutes

B. Between 30 and 40 minutes

C. Between 50 and 60 minutes

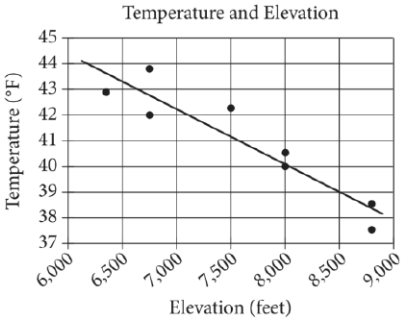
D. Between 90 and 100 minutes

Question ID ac5b6558

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

ID: ac5b6558

1.3



The scatterplot above shows the high temperature on a certain day and the elevation of 8 different locations in the Lake Tahoe Basin. A line of best fit for the data is also shown. What temperature is predicted by the line of best fit for a location in the Lake Tahoe Basin with an elevation of 8,500 feet?

A. 37°F

B. 39°F

C. 41°F

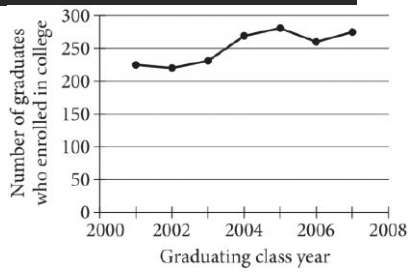
D. 43°F

Question ID 74dee52b

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

ID: 74dee52b

1.4



The line graph shows the number of graduates from the classes of 2001 through 2007 at a certain school who enrolled in college within 24 months of graduation. Of the following, which class had the fewest graduates who enrolled in college within 24 months of graduation?

A. 2002

B. 2004

C. 2005

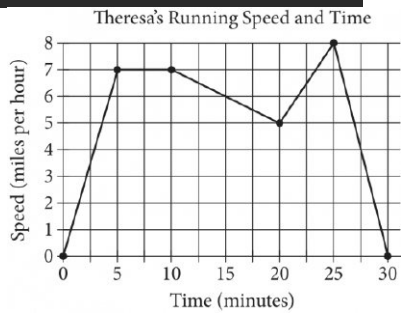
D. 2007

Question ID 9d88a3e3

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

ID: 9d88a3e3

1.5



Theresa ran on a treadmill for thirty minutes, and her time and speed are shown on the graph above. According to the graph, which of the following statements is NOT true concerning Theresa's run?

A. Theresa ran at a constant speed for five minutes.

B. Theresa's speed was increasing for a longer period of time than it was decreasing.

C. Theresa's speed decreased at a constant rate during the last five minutes.

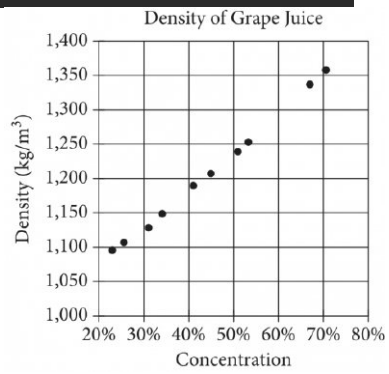
D. Theresa's speed reached its maximum during the last ten minutes.

Question ID c9dd92b1

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

ID: c9dd92b1

1.6



The densities of different concentrations of grape juice are shown in the scatterplot above. According to the trend shown by the data, which of the following is closest to the predicted density, in kilograms per cubic meter (kg/m^3), for grape juice with a concentration of 60%?

A. 1,200

B. 1,250

C. 1,300

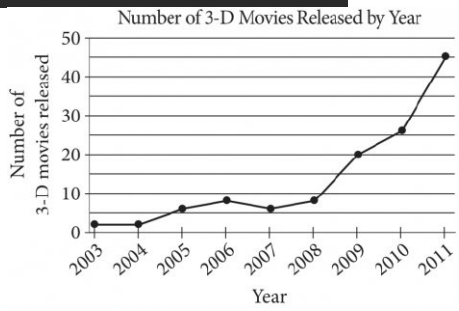
D. 1,350

Question ID a6b2fcce

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

ID: a6b2fcce

1.7



According to the line graph above, between which two consecutive years was there the greatest change in the number of 3-D movies released?

A. 2003–2004

B. 2008–2009

C. 2009–2010

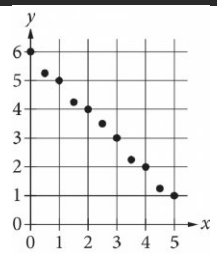
D. 2010–2011

Question ID 9296553d

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

ID: 9296553d

1.8



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

A. $y = -x + 6$

B. $y = -x - 6$

C. $y = 6x + 1$

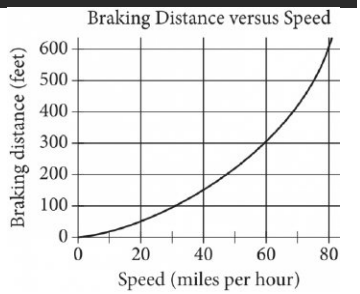
D. $y = 6x - 1$

Question ID d6121490

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

ID: d6121490

1.9



The graph above shows the relationship between the speed of a particular car, in miles per hour, and its corresponding braking distance, in feet. Approximately how many feet greater will the car's braking distance be when the car is traveling at 50 miles per hour than when the car is traveling at 30 miles per hour?

A. 75

B. 125

C. 175

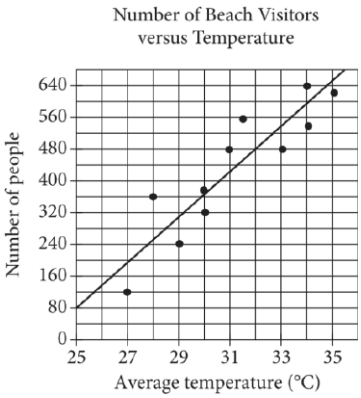
D. 250

Question ID 8156d446

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

ID: 8156d446

1.10



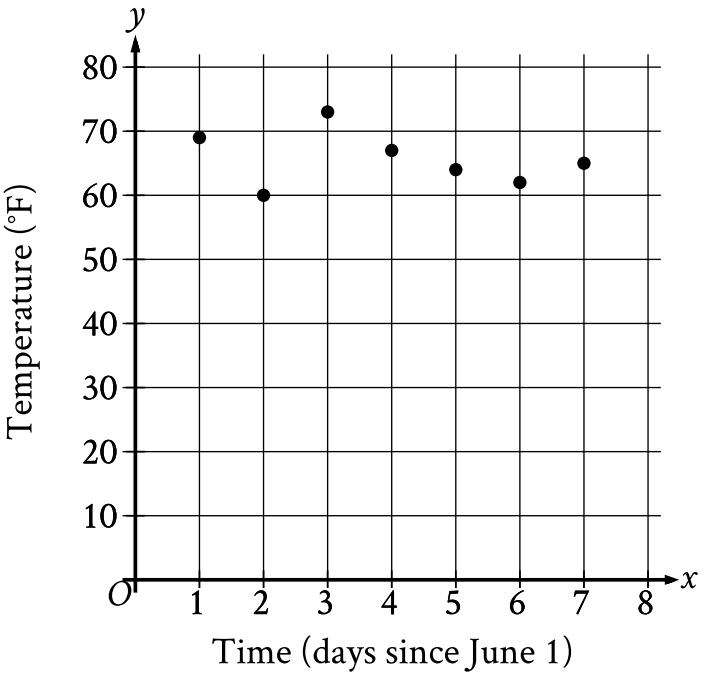
Each dot in the scatterplot above represents the temperature and the number of people who visited a beach in Lagos, Nigeria, on one of eleven different days. The line of best fit for the data is also shown. According to the line of best fit, what is the number of people, rounded to the nearest 10, predicted to visit this beach on a day with an average temperature of 32°C?

Question ID d112bc9d

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

ID: d112bc9d 1.11

The scatterplot shows the temperature y, in $^\circ\mathrm{F}$, recorded by a meteorologist at various times x, in days since June 1.



During which of the following time periods did the greatest increase in recorded temperature take place?

A. From $x = 6$ to $x = 7$

B. From $x = 5$ to $x = 6$

C. From $x = 2$ to $x = 3$

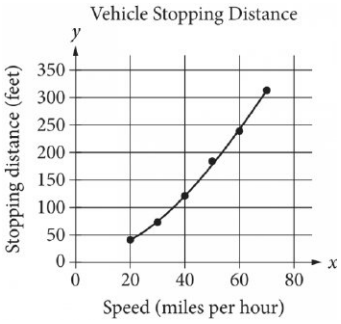
D. From $x = 1$ to $x = 2$

Question ID 5c24c861

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

ID: 5c24c861 1.12

A study was done to determine a new car's stopping distance when it was traveling at different speeds. The study was done on a dry road with good surface conditions. The results are shown below, along with the graph of a quadratic function that models the data.



According to the model, which of the following is the best estimate for the stopping distance, in feet, if the vehicle was traveling 55 miles per hour?

A. 25

B. 30

C. 210

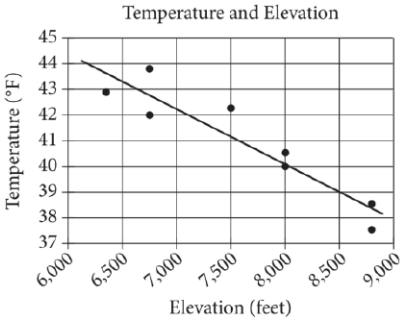
D. 250

Question ID 661dfddd

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

ID: 661dfddd

1.13



The scatterplot above shows the high temperature on a certain day and the elevation of 8 different locations in the Lake Tahoe Basin. A line of best fit for the data is also shown. Which of the following statements best describes the association between the elevation and the temperature of locations in the Lake Tahoe Basin?

A. As the elevation increases, the temperature tends to increase.

B. As the elevation increases, the temperature tends to decrease.

C. As the elevation decreases, the temperature tends to decrease.

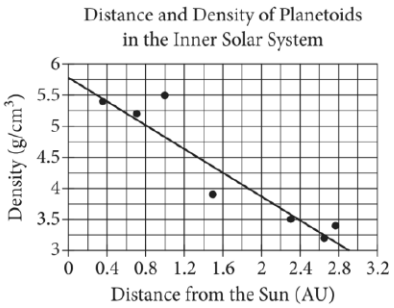
D. There is no association between the elevation and the temperature.

Question ID cf0ae57a

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

ID: cf0ae57a

1.14



The scatterplot above shows the densities of 7 planetoids, in grams per cubic centimeter, with respect to their average distances from the Sun in astronomical units (AU). The line of best fit is also shown. An astronomer has discovered a new planetoid about 1.2 AU from the Sun. According to the line of best fit, which of the following best approximates the density of the planetoid, in grams per cubic centimeter?

A. 3.6

B. 4.1

C. 4.6

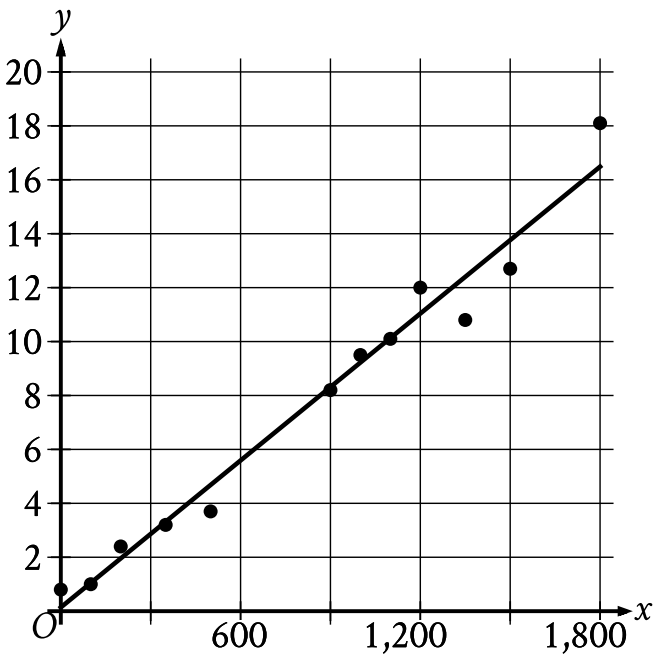
D. 5.5

Question ID ae32cc3c

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

ID: ae32cc3c

1.15



Twelve data points are shown in the scatterplot. A line of best fit for the data is also shown. At $x = 1{,}200$, which of the following is closest to the *y*-value predicted by the line of best fit?

A. 16

B. 14

C. 11

D. 6

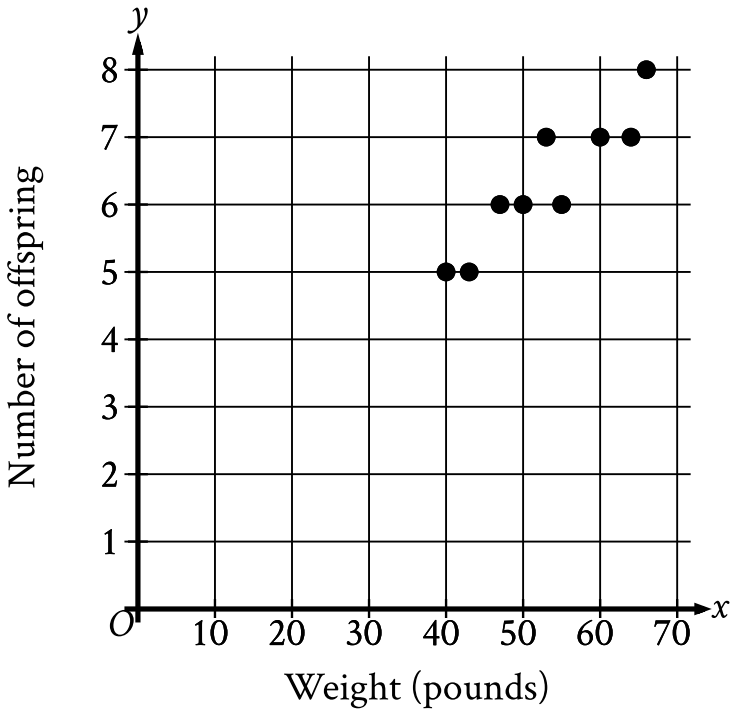
Question ID 8d63b6f1

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

ID: 8d63b6f1

1.16

The scatterplot shows the relationship between the weight, in pounds, of each of 9 female gray wolves on April 30 and the number of offspring each gray wolf produced.



How many offspring did the 50-pound gray wolf produce?

A. 8

B. 7

C. 6

D. 5

Question ID a03b7e02

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

ID: a03b7e02

1.17

The table shows selected values from function f.

x	$f(x)$
-1	16
0	17
1	18
2	19

Which of the following is the best description of function f?

A. Decreasing linear

B. Increasing linear

C. Decreasing exponential

D. Increasing exponential

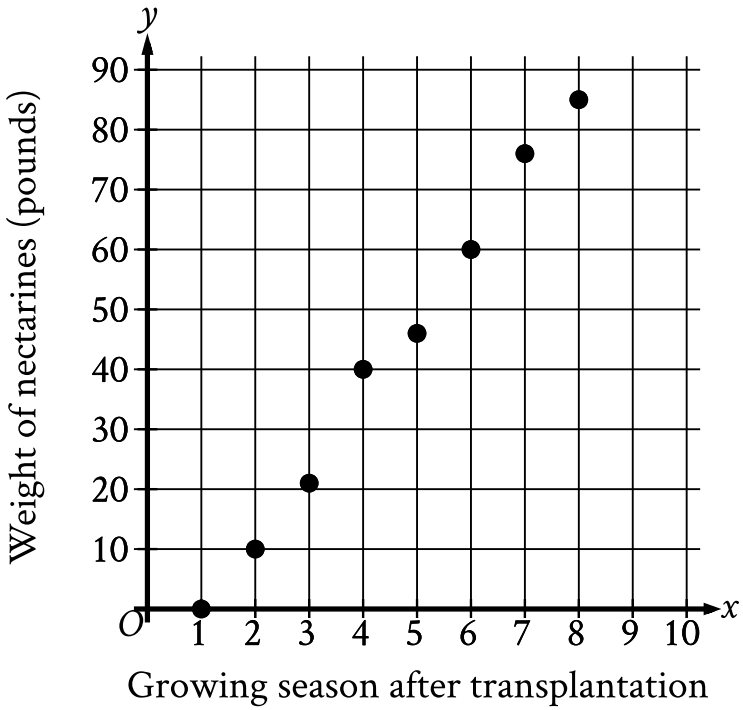
Question ID b58dbf88

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

ID: b58dbf88

1.18

An orchard owner recorded the weight, in pounds, of all nectarines that grew on a dwarf nectarine tree during each growing season after the tree's transplantation. The scatterplot shows this weight, in pounds, for each growing season after the tree's transplantation.



What was the weight, to the nearest pound, of all nectarines that grew on the tree during the 4th growing season after the tree's transplantation?

Question ID 15ce8207

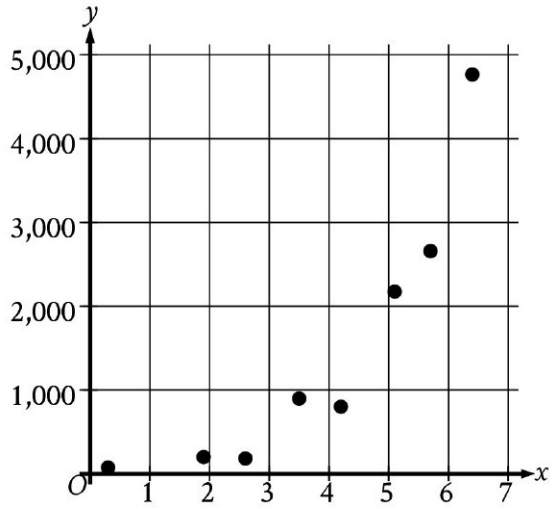
Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Problem-Solving and Data Analysis	Two-variable data: Models and scatterplots	■□□

ID: 15ce8207

1.19

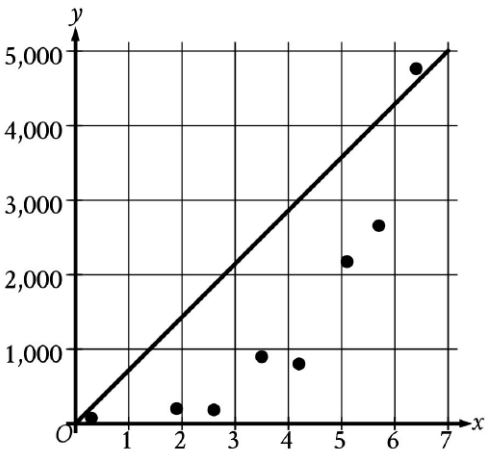
The scatterplot shows the relationship between two variables, x and y.

y.

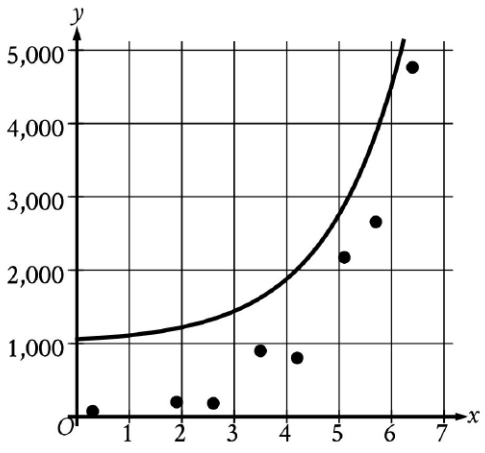


Which of the following graphs shows the most appropriate model for the data?

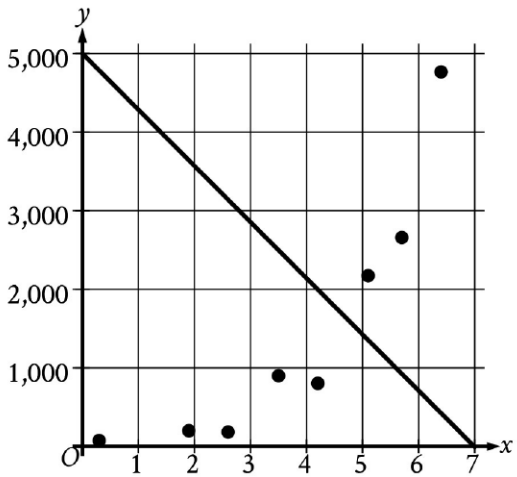
A.



C.



B.



D.