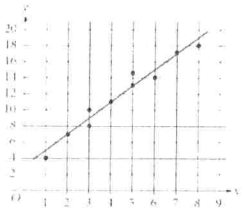
LINE of BEST FIT

1

4



Ten data points are in the scatterplot shown, along with a line of best fit. Which of the following best estimates the predicted value of y when $x = 6.5$?

A) 2

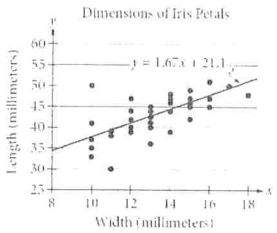
B) 8

C) 13

D) 16

2

4



A) 21.10

B) 31.73

C) 52.83

D) 55.27

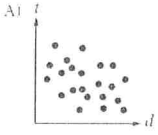
The scatterplot above shows data collected on the lengths and widths of *Iris setosa* petals. A line of best fit for the data is also shown. Based on the line of best fit, if the width of an *Iris setosa* petal is 19 millimeters, what is the predicted length, in millimeters, of the petal?

3

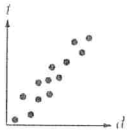
5

Which of the following graphs best shows a strong negative association between d and t?

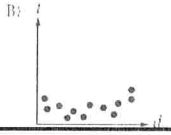
A)



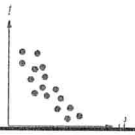
C)



B)

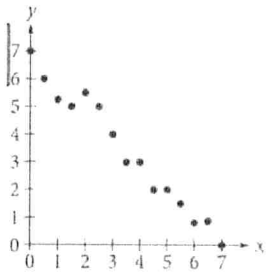


D)



4

6



A) $y = -7+x$

B) $y = -7-x$

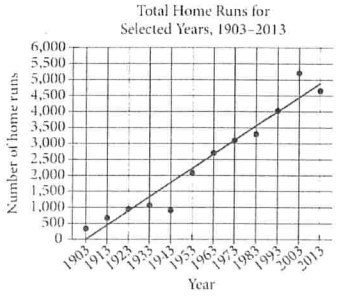
C) $y = 7+x$

D) $y = 7-x$

Of the following, which is the most appropriate linear model for the given data?

5

9



The scatterplot above shows the total number of home runs hit in major league baseball, in ten-year intervals, for selected years. The line of best fit for the data is also shown. Which of the following is closest to the difference between the actual number of home runs and the number predicted by the line of best fit in 2003?

A) 250

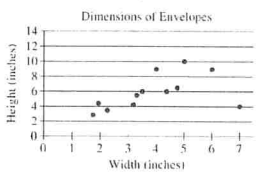
B) 500

C) 750

D) 850

6

9



The scatterplot above shows the widths and the heights of 12 types of rectangular envelopes. What is the width, in inches, of the envelope represented by the data point that is farthest from the line of best fit (not shown)?

A) 2

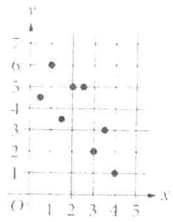
B) 5

C) 7

D) 12

7

10



A) $y=6-x$

B) $y=6+x$

C) $y=-6-x$

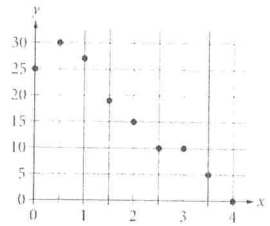
D) $y=-6+x$

Which of the following linear equations is the most appropriate model for the data shown in the scatterplot?

8

11

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



A) $y = -7 + 30x$

B) $y = 7 - 30x$

C) $y = 30 + 7x$

D) $y = 30 - 7x$

Which of the following equations is the most appropriate linear model for the data shown?

9

The scatterplot shows 10 values from a data set. Which of the following equations is the most appropriate linear model for the data shown?

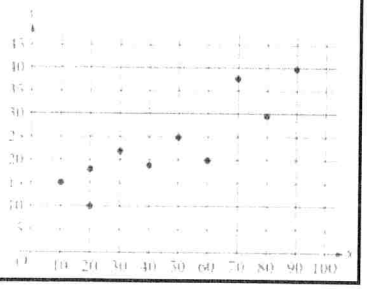
A) $y=9+\frac{3}{10}x$

B) $y=9-\frac{3}{10}x$

C) $y=\frac{6}{5}x$

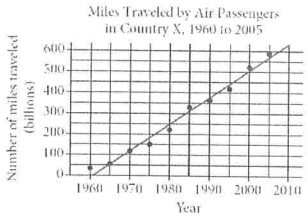
D) $y=\frac{3}{8}x$

12



10

14



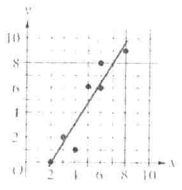
According to the line of best fit in the scatterplot above, which of the following best approximates the year in which the number of miles traveled by air passengers in Country X was estimated to be 530 billion?

A) 1997 C) 2003

B) 2000 D) 2008

11

15



A) 1

B) 2

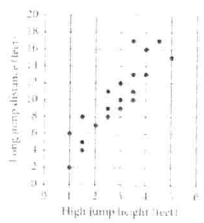
C) 3

D) 4

The scatterplot shows the relationship between two variables, x and y. A line of best fit is also shown. For how many of the data points is the actual y-value at least 1 greater than the y-value predicted by the line of best fit?

12

15



A) $y = 0.82x + 3.30$

B) $y = 0.82x - 0.82$

C) $y = 3.30x + 0.82$

D) $y = 3.30x - 3.30$

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?

1 D 3 D 5 C 7 A 9 A 11 B

2 C 4 D 6 C 8 D 10 C 12 C