

SAT PREP

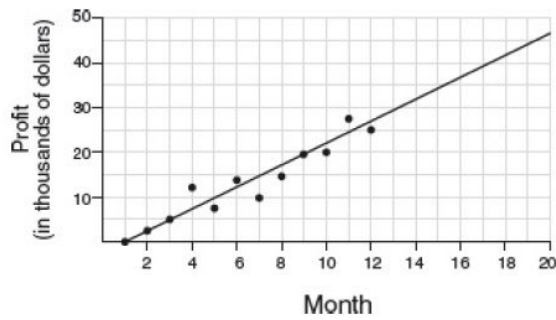
Assignment : Scatter Plot

- Which survey is most likely to have the *least* bias?
 - surveying a sample of people leaving a movie theater to determine which flavor of ice cream is the most popular
 - surveying the members of a football team to determine the most watched TV sport
 - surveying a sample of people leaving a library to determine the average number of books a person reads in a year
 - surveying a sample of people leaving a gym to determine the average number of hours a person exercises per week
- Erica is conducting a survey about the proposed increase in the sports budget in the Hometown School District. Which survey method would likely contain the *most* bias?
 - Erica asks every third person entering the Hometown Grocery Store
 - Erica asks every third person leaving the Hometown Shopping Mall this weekend
 - Erica asks every fifth student entering Hometown High School on Monday morning
 - Erica asks every fifth person leaving Saturday's Hometown High School football game

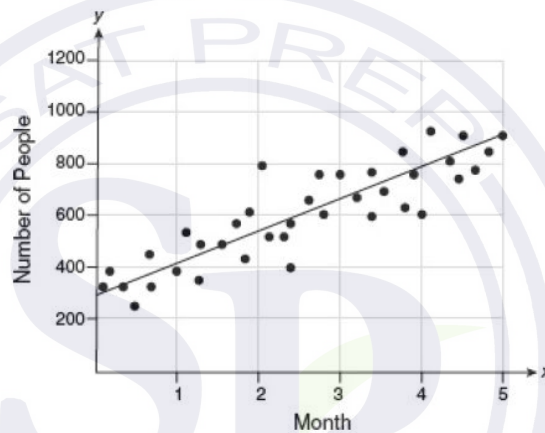
Ages of People in Survey on Driving Habits

Age Group	Number of Drivers
16–25	150
26–35	129
36–45	33
46–55	57
56–65	31

- The table above summarizes the number of people by age group who were included in a survey of driving habits. Which of the following statements is true?
 - The survey was not biased since different age groups were included.
 - The survey was biased because individuals 36 and older were underrepresented.
 - The survey was biased because it did not differentiate between males and females.
 - The survey was not biased since a large number of drivers were polled.



4. The scatterplot above shows the profit, by month, for a new company for the first year of operation. A line of best fit is also shown. Using this line, by what dollar amount did the profit in the 18th month exceed the profit in the 13th month?
- (A) \$5,000
 (B) \$7,750
 (C) \$12,500
 (D) \$15,000



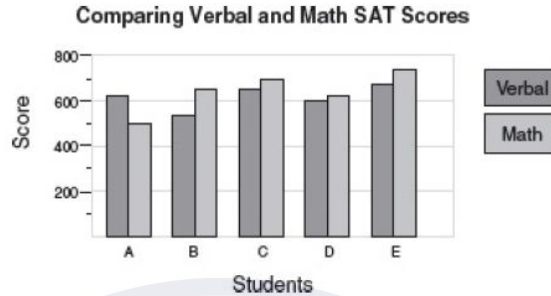
Questions 5–7 refer to the scatterplot above.

A new fitness class was started at several fitness clubs owned by the same company. The scatterplot shows the total number of people attending the class during the first five months in which the class was offered. The line of best fit is drawn.

5. For month 4, the predicted number of people attending the class was approximately what percent greater than the actual number of people attending the class?
- (A) 15%
 (B) 20%
 (C) 30%
 (D) 36%
6. During the five-month period, the average increase in the number of people attending the class per month is closest to which of the following?
- (A) 80
 (B) 100
 (C) 120

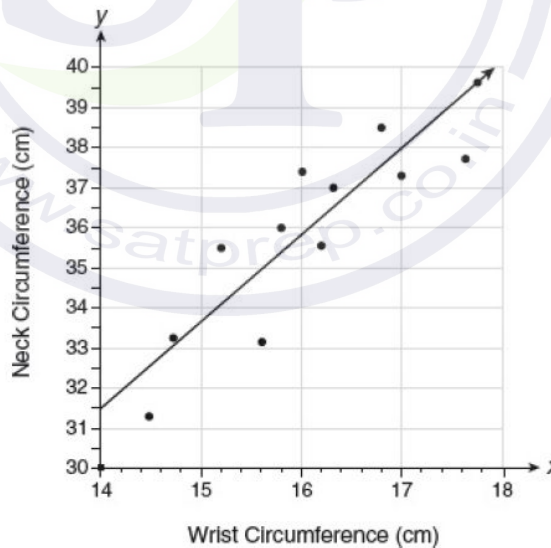
(D) 140

7. At the beginning of which month did the actual number of people attending the class differ by the greatest amount from the number predicted by the line of best fit?
- (A) month 2
(B) month 3
(C) month 4
(D) month 5



8. The bar graph above shows the verbal and math SAT scores for five students labeled A through E. If a scatterplot of the data in the bar graph is made such that the math SAT score for each student is plotted along the x -axis and their verbal SAT score is plotted along the y -axis, how many of the data points would lie above the line $y = x$?
- (A) 1
(B) 2
(C) 3
(D) 4

Grid-In



Questions 1–3 refer to the above scatterplot, which shows wrist and neck circumference measurements, in centimeters, for 12 people. The line of best fit is drawn.

1. What is the predicted neck circumference, in centimeters, for someone whose wrist circumference is 17.0 cm?
2. How many of the 12 people have an actual neck circumference that differs by more than 1 centimeter from the neck circumference predicted by the line of best fit?
3. What is the average increase in neck circumference per centimeter increase in wrist circumference, correct to the *nearest tenth*?

