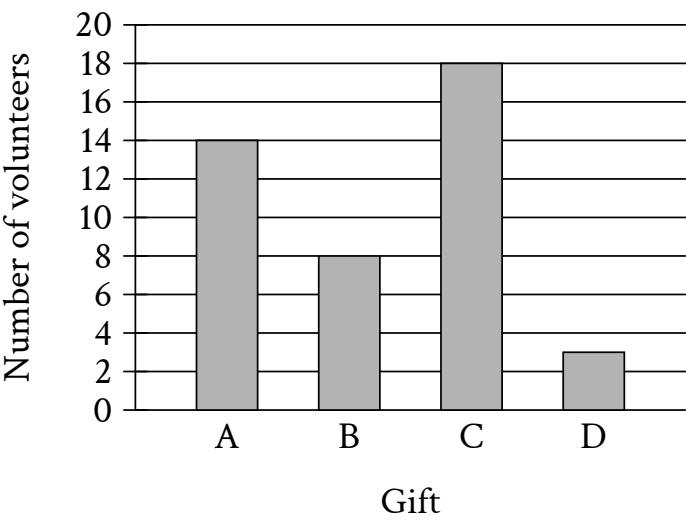


Question ID c4fdaf51

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Problem-Solving and Data Analysis	One-variable data: Distributions and measures of center and spread	<div><div></div><div></div><div></div></div>

ID: c4fdaf51



In April, there were **43** volunteers in a cleanup project. Each volunteer was asked to choose a small gift labeled A, B, C, or D. The bar graph shows the number of volunteers who chose each gift. How many volunteers chose gift C?

- A. 3
- B. 8
- C. 14
- D. 18

ID: c4fdaf51 Answer

Correct Answer: D

Rationale

Choice D is correct. The height of each bar in the graph shown represents the number of volunteers who chose the gift labeled with the letter specified at the bottom of the bar. The bar for gift C has a height of 18. Therefore, 18 volunteers chose gift C.

Choice A is incorrect. This is the number of volunteers who chose gift D, not gift C.

Choice B is incorrect. This is the number of volunteers who chose gift B, not gift C.

Choice C is incorrect. This is the number of volunteers who chose gift A, not gift C.

Question Difficulty: Easy

Question ID fb1030d6

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Problem-Solving and Data Analysis	One-variable data: Distributions and measures of center and spread	<div><div></div><div></div><div></div></div>

ID: fb1030d6



The box plot summarizes **15** data values. What is the median of this data set?

- A. **2**
- B. **3**
- C. **5**
- D. **8**

ID: fb1030d6 Answer

Correct Answer: C

Rationale

Choice C is correct. The median of a data set represented in a box plot is given by the vertical line within the box. In the given box plot, the vertical line within the box occurs at 5. Therefore, the median of this data set is 5.

Choice A is incorrect. This is the minimum value of the data set.

Choice B is incorrect and may result from conceptual errors.

Choice D is incorrect. This is the maximum value of the data set.

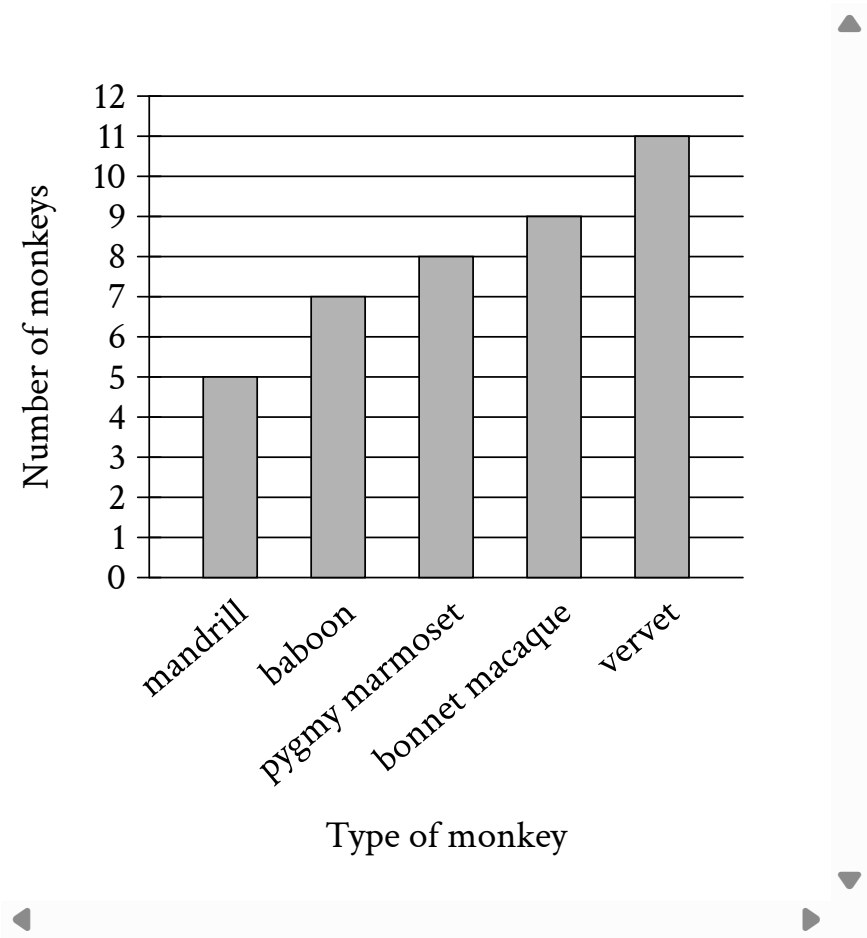
Question Difficulty: Easy

Question ID 4657e808

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Problem-Solving and Data Analysis	One-variable data: Distributions and measures of center and spread	<div><div></div><div></div><div></div></div>

ID: 4657e808

The bar graph shows the number of each type of monkey in a sanctuary.



How many more vervets are in this sanctuary than mandrills?

- A. 11
- B. 6
- C. 5
- D. 3

ID: 4657e808 Answer

Correct Answer: B

Rationale

Choice B is correct. It's given that the bar graph shows the number of each type of monkey in a sanctuary. The bar representing the number of mandrills has a height of 5; therefore, there are 5 mandrills in the sanctuary. The bar representing vervets has a height of 11; therefore, there are 11 vervets in the sanctuary. Therefore, there are $11 - 5$, or 6, more vervets in this sanctuary than mandrills.

Choice A is incorrect. This is the number of vervets in the sanctuary.

Choice C is incorrect. This is the number of mandrills in the sanctuary.

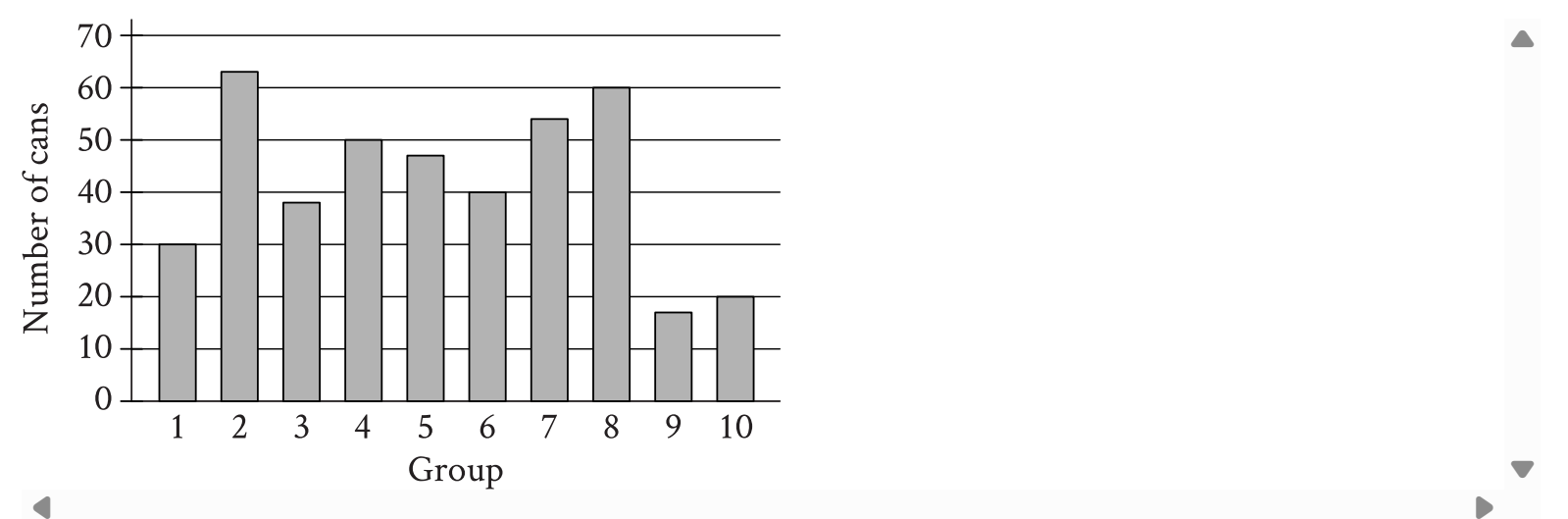
Choice D is incorrect and may result from conceptual or calculation errors.

Question Difficulty: Easy

Question ID e379f53e

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Problem-Solving and Data Analysis	One-variable data: Distributions and measures of center and spread	<div><div></div><div></div><div></div></div>

ID: e379f53e



The bar graph shows the distribution of **419** cans collected by **10** different groups for a food drive. How many cans were collected by group **6**?

ID: e379f53e Answer

Correct Answer: 40

Rationale

The correct answer is 40. The height of each bar in the bar graph shown represents the number of cans collected by the group specified at the bottom of the bar. The bar for group 6 reaches a height of 40. Therefore, group 6 collected 40 cans.

Question Difficulty: Easy

Question ID 0a4c8e3f

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Problem-Solving and Data Analysis	One-variable data: Distributions and measures of center and spread	<div><div></div><div></div><div></div></div>

ID: 0a4c8e3f

Type of store	Average number of employees
Warehouse store	365
Department store	213
Supermarket	130

For a certain region, the table shows the average number of store employees in **2016** by type of store. Based on the table, how much greater was the average number of store employees in warehouse stores than in supermarkets?

- A. 83
- B. 152
- C. 235
- D. 495

ID: 0a4c8e3f Answer

Correct Answer: C

Rationale

Choice C is correct. The table shows that for a certain region in 2016, the average number of store employees in warehouse stores was 365 and the average number of store employees in supermarkets was 130. Subtracting 130 from 365 yields 365 - 130, or 235. Therefore, the average number of store employees was 235 greater in warehouse stores than in supermarkets.

Choice A is incorrect. For this region in 2016, this is how much greater the average number of store employees was in department stores than in supermarkets.

Choice B is incorrect. For this region in 2016, this is how much greater the average number of store employees was in warehouse stores than in department stores.

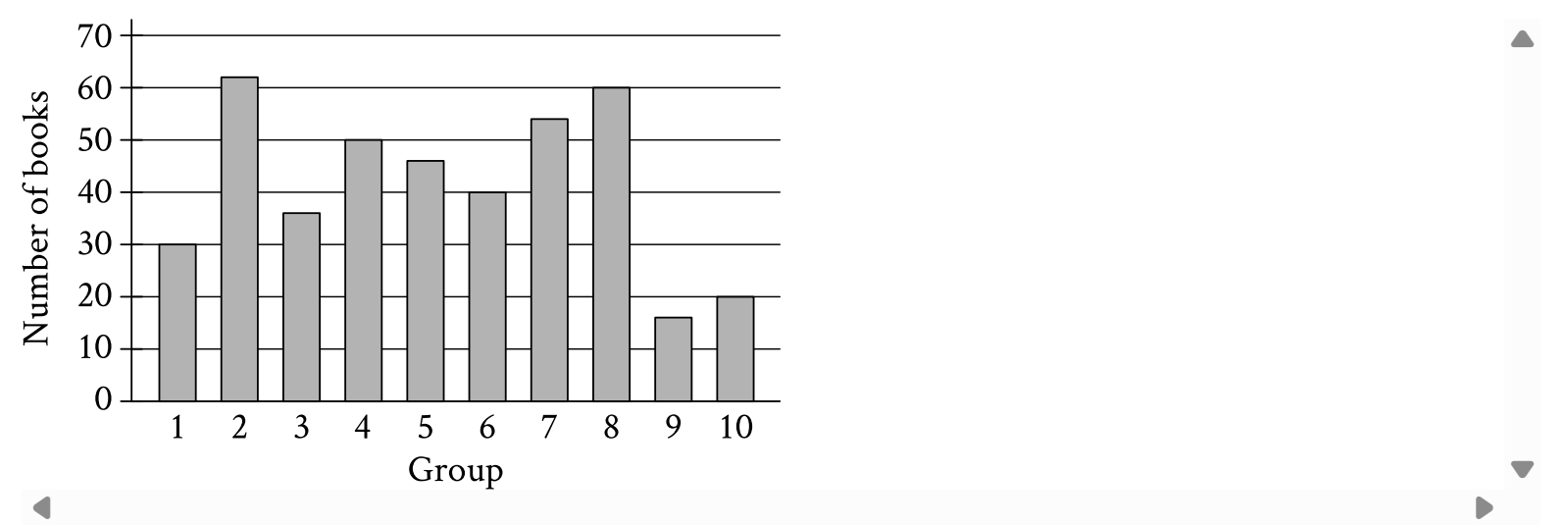
Choice D is incorrect. For this region in 2016, this is the sum of the average number of store employees in warehouse stores and in supermarkets.

Question Difficulty: Easy

Question ID 698ae17f

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Problem-Solving and Data Analysis	One-variable data: Distributions and measures of center and spread	<div><div></div><div></div><div></div></div>

ID: 698ae17f



The bar graph shows the distribution of 414 books collected by 10 different groups for a book drive. How many books were collected by group 1?

ID: 698ae17f Answer

Correct Answer: 30

Rationale

The correct answer is 30. The height of each bar in the bar graph shown represents the number of books collected by the group specified at the bottom of the bar. The bar for group 1 reaches a height of 30. Therefore, group 1 collected 30 books.

Question Difficulty: Easy

Question ID 2b08ad50

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Problem-Solving and Data Analysis	One-variable data: Distributions and measures of center and spread	<div><div></div><div></div><div></div></div>

ID: 2b08ad50



A data set consists of **173** colors. The bar graph shows the number of times each color appears in the data set. Which color appears **70** times?

- A. Blue
- B. Green
- C. Red
- D. Yellow

ID: 2b08ad50 Answer

Correct Answer: B

Rationale

Choice B is correct. It's given that a data set consists of 173 colors and the bar graph shows the number of times each color appears in the data set. Therefore, for each color specified at the bottom of the bar, the frequency corresponds to the number of times that color appears in the data set. The color that appears 70 times in the data set has a frequency of 70 on the bar graph. Since the bar with a frequency of 70 corresponds to green, green is the color that appears 70 times.

Choice A is incorrect. The color blue appears about 27 times, not 70 times.

Choice C is incorrect. The color red appears about 33 times, not 70 times.

Choice D is incorrect. The color yellow appears about 43 times, not 70 times.

Question Difficulty: Easy

Question ID 01ea7e10

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Problem-Solving and Data Analysis	One-variable data: Distributions and measures of center and spread	<div><div></div><div></div><div></div></div>

ID: 01ea7e10

73, 74, 75, 77, 79, 82, 84, 85, 91
What is the median of the data shown?

ID: 01ea7e10 Answer

Correct Answer: 79

Rationale

The correct answer is 79. The median of a data set with an odd number of values is the middle value of the set when the values are ordered from least to greatest. Because the given data set consists of nine values that are ordered from least to greatest, the median is the fifth value in the data set. Therefore, the median of the data shown is 79.

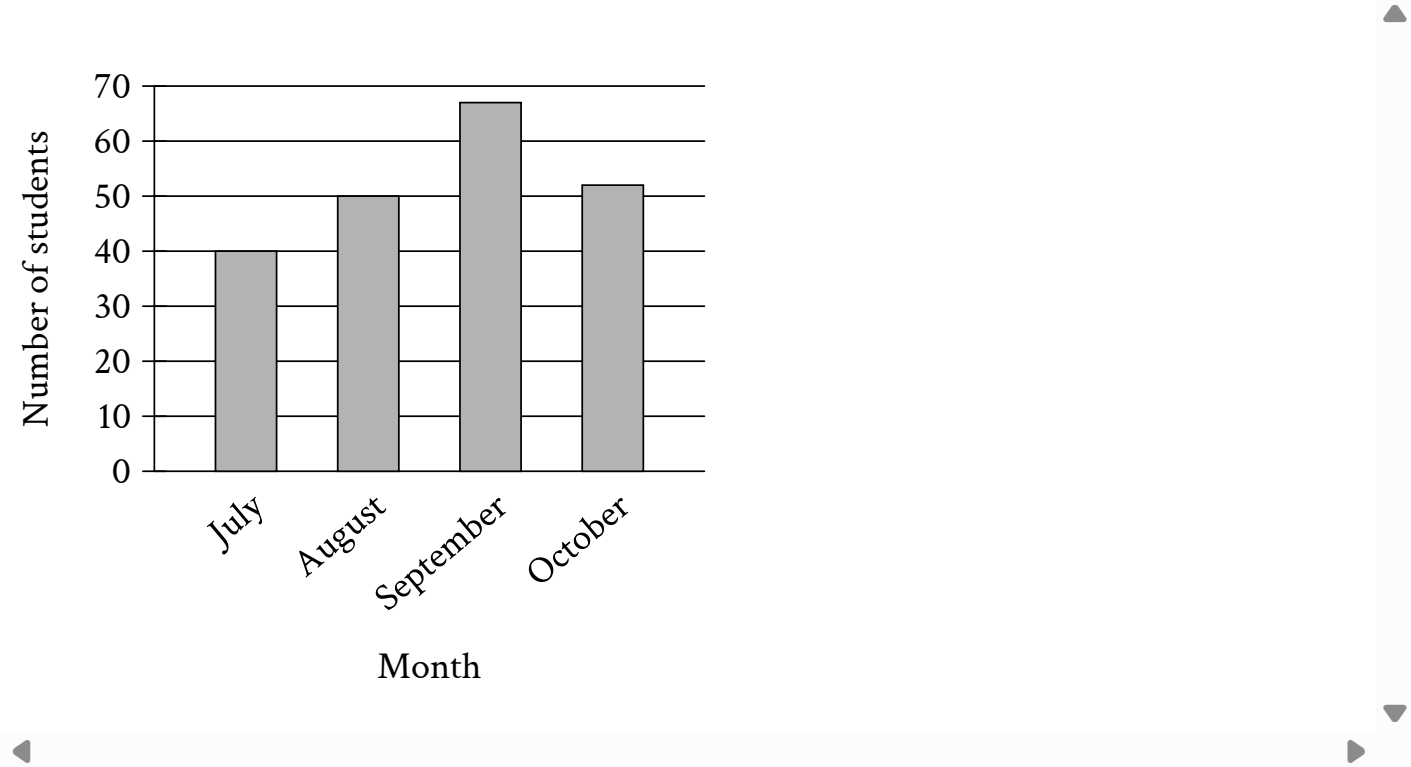
Question Difficulty: Easy

Question ID cfe3427c

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Problem-Solving and Data Analysis	One-variable data: Distributions and measures of center and spread	<div><div></div><div></div><div></div></div>

ID: cfe3427c

The bar graph shows the distribution of the number of students from one school who were born in one of four months.



How many more students were born in August than were born in July?

- A. 90
- B. 50
- C. 40
- D. 10

ID: cfe3427c Answer

Correct Answer: D

Rationale

Choice D is correct. It's given that the bar graph shows the number of students from one school who were born in either July, August, September, or October. The bar representing the number of students born in August has a height of 50; therefore, 50 students were born in August. The bar representing the number of students born in July has a height of 40; therefore, 40 students were born in July. Thus, there were 50 - 40, or 10 more students born in August than in July.

Choice A is incorrect. This is the total number of students born in July and August.

Choice B is incorrect. This is the number of students born in August.

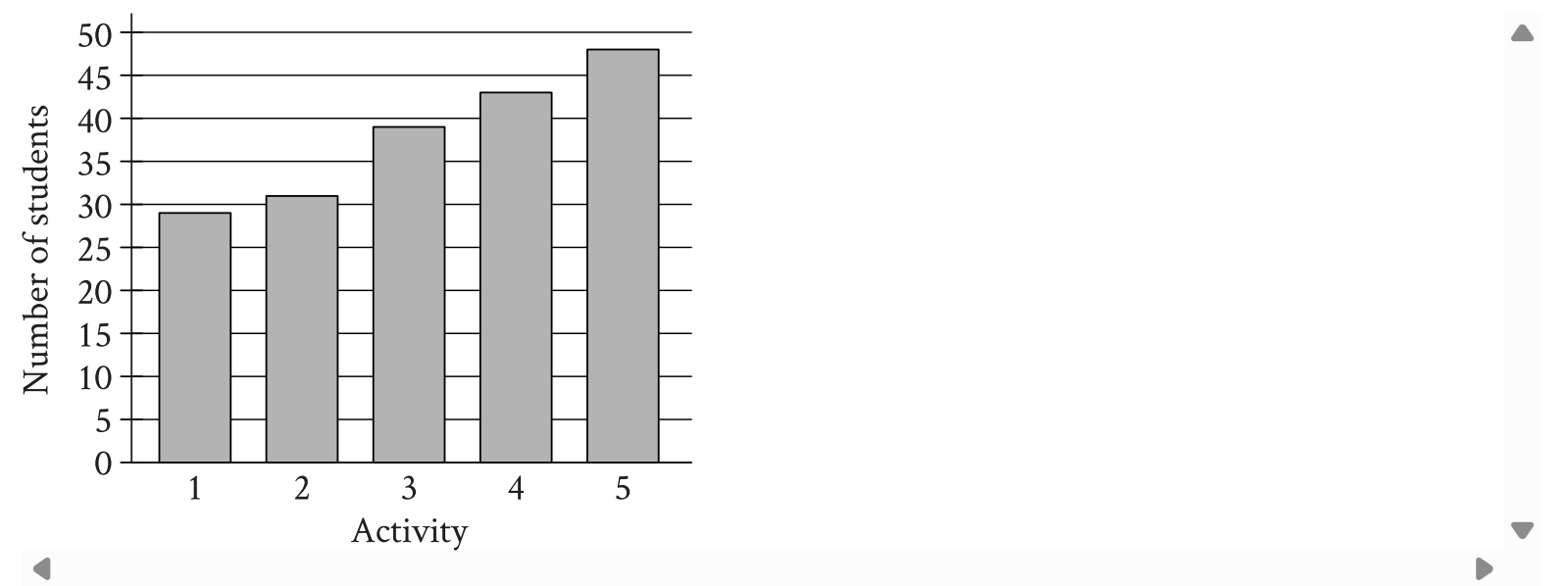
Choice C is incorrect. This is the number of students born in July.

Question Difficulty: Easy

Question ID 470b8ed4

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Problem-Solving and Data Analysis	One-variable data: Distributions and measures of center and spread	<div><div></div><div></div><div></div></div>

ID: 470b8ed4



A group of students voted on five after-school activities. The bar graph shows the number of students who voted for each of the five activities. How many students chose activity 3?

- A. 25
- B. 39
- C. 48
- D. 50

ID: 470b8ed4 Answer

Correct Answer: B

Rationale

Choice B is correct. The height of each bar in the bar graph given represents the number of students that voted for the activity specified at the bottom of the bar. The bar for activity 3 has a height that is between 35 and 40. In other words, the number of students that chose activity 3 is between 35 students and 40 students. Of the given choices, 39 is the only value between 35 and 40. Therefore, 39 students chose activity 3.

Choice A is incorrect and may result from conceptual errors.

Choice C is incorrect. This is the number of students that chose activity 5, not activity 3.

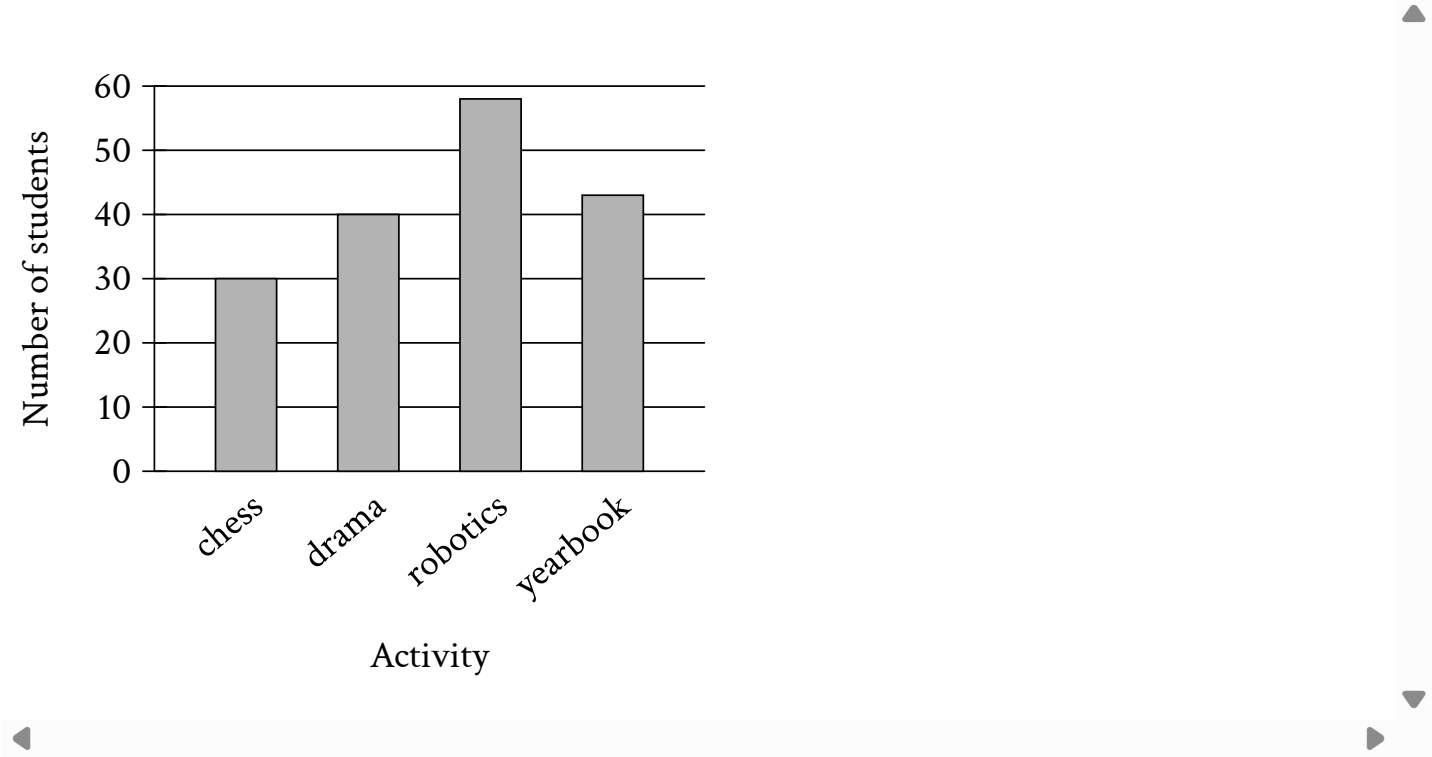
Choice D is incorrect and may result from conceptual errors.

Question ID ae909a50

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Problem-Solving and Data Analysis	One-variable data: Distributions and measures of center and spread	<div><div></div><div></div><div></div></div>

ID: ae909a50

The bar graph shows the distribution of the number of students in each of four extracurricular activities at a high school.



How many more students are in drama than in chess?

- A. 10
- B. 30
- C. 40
- D. 70

ID: ae909a50 Answer

Correct Answer: A

Rationale

Choice A is correct. It's given that the bar graph shows the distribution of the number of students in each of four extracurricular activities at a high school. The bar representing drama has a height of 40; therefore, there are 40 students in drama. The bar representing chess has a height of 30; therefore, there are 30 students in chess. Thus, there are 40 - 30, or 10 more students in drama than in chess.

Choice B is incorrect. This is the number of students in chess.

Choice C is incorrect. This is the number of students in drama.

Choice D is incorrect. This is the sum of the number of students in drama and in chess.

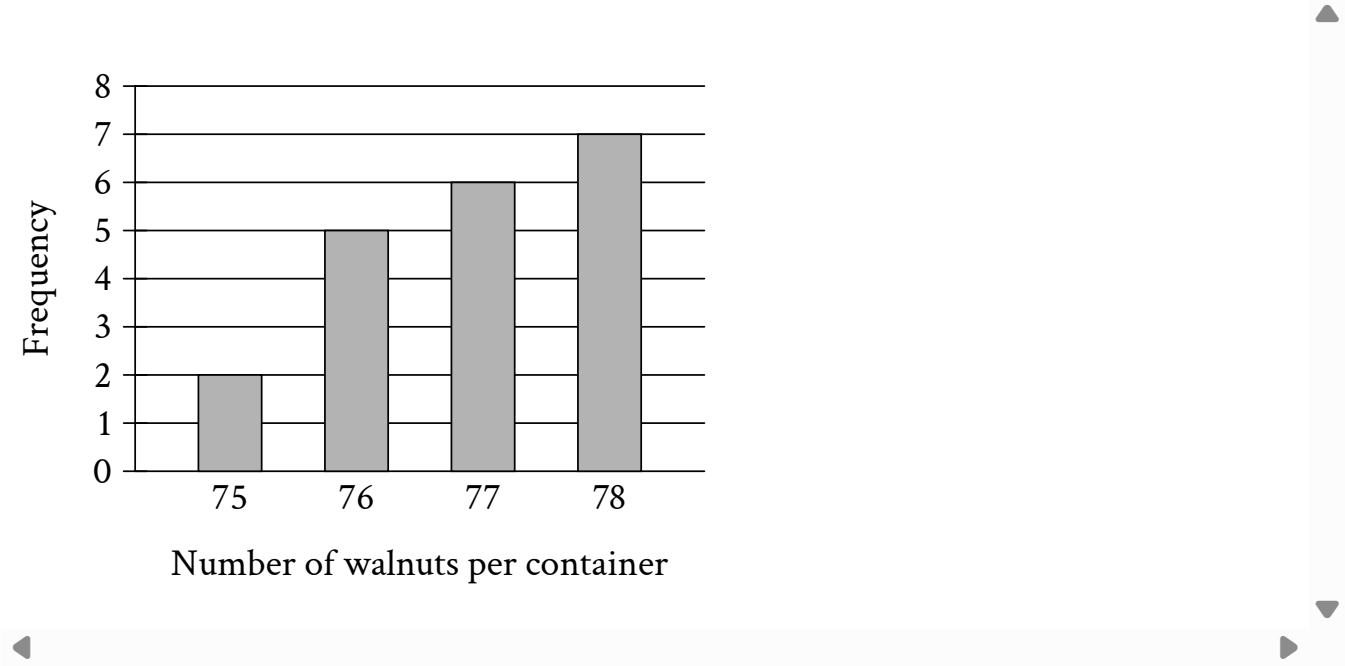
Question Difficulty: Easy

Question ID 7803c68e

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Problem-Solving and Data Analysis	One-variable data: Distributions and measures of center and spread	<div><div></div><div></div><div></div></div>

ID: 7803c68e

The bar graph shows the distribution of the number of walnuts per container for **20** containers at a grocery store.



How many of these containers of walnuts contain exactly **78** walnuts?

- A. **2**
- B. **7**
- C. **20**
- D. **78**

ID: 7803c68e Answer

Correct Answer: B

Rationale

Choice B is correct. The height of each bar in the graph shown represents the number of containers that contain the number of walnuts specified at the bottom of the bar. The bar for 78 walnuts has a height of 7. Therefore, 7 of these containers of walnuts contain exactly 78 walnuts.

Choice A is incorrect. This is the number of containers that contain exactly 75 walnuts, not 78 walnuts.

Choice C is incorrect. This is the total number of containers of walnuts represented in the bar graph, not the number that contain exactly 78 walnuts.

Choice D is incorrect. This is the number of walnuts in a container that contains exactly 78 walnuts, not the number of containers that contain exactly 78 walnuts.

Question Difficulty: Easy

Question ID 20afeceb

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Problem-Solving and Data Analysis	One-variable data: Distributions and measures of center and spread	<div><div></div><div></div><div></div></div>

ID: 20afeceb

Response	Frequency
Once a week or more	3
Two or three times a month	16
About once a month	26
A few times a year	73
Almost never	53
Never	29
Total	200

The table gives the results of a survey of **200** people who were asked how often they see a movie in a theater. How many people responded either “never” or “almost never”?

- A. **24**
- B. **53**
- C. **82**
- D. **118**

ID: 20afeceb Answer

Correct Answer: C

Rationale

Choice C is correct. The table gives the results of 200 people who were asked how often they see a movie in a theater. The table shows that 29 people responded “never” and 53 people responded “almost never.” Therefore, $29 + 53$, or 82, people responded either “never” or “almost never.”

Choice A is incorrect. This is the difference between the number of people who responded “almost never” and the number of people who responded “never.”

Choice B is incorrect. This is the number of people who responded “almost never” but doesn't include those who responded “never.”

Choice D is incorrect. This is the number of people who responded something other than “never” or “almost never,” rather than the number of people who responded either “never” or “almost never.”

Question Difficulty: Easy

Question ID c16339ac

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Problem-Solving and Data Analysis	One-variable data: Distributions and measures of center and spread	<div><div></div><div></div><div></div></div>

ID: c16339ac

71, 72, 73, 76, 77, 79, 83, 87, 93
What is the median of the data shown?

- A. 71
- B. 77
- C. 78
- D. 79

ID: c16339ac Answer

Correct Answer: B

Rationale

Choice B is correct. The median of a data set with an odd number of data values is defined as the middle value of the ordered list of values. The data set shown has nine values, so the median is the fifth value in the ordered list, which is 77.

Choice A is incorrect. This is the minimum value of the data set, not the median.

Choice C is incorrect and may result from conceptual or calculation errors.

Choice D is incorrect. This is the mean of the data set, not the median.

Question Difficulty: Easy