

## Statistics, Data Analysis, and Probability

36. Donald priced six personal Compact Disc (CD) players. The prices are shown below.

\$21.00, \$23.00, \$21.00, \$39.00, \$25.00, \$31.00

What is the median price?

- A \$21.00  
B \$24.00  
C \$27.00  
D \$30.00

M02964

37. Rico's first three test scores in biology were 65, 90, and 73. What was his mean score?

- A 65  
B 73  
C 76  
D 90

M02347

38. The chart below shows the mathematics test scores of three students.

Mathematics Test Scores

	Test 1	Test 2	Test 3	Test 4
Parisa	7	8	10	6
Hector	6	7	9	10
Charles	8	10	10	9

What is Hector's mean score?

- A 6  
B 7  
C 8  
D 9

M00124

39. The box below shows the number of kilowatt-hours of electricity used last month at each of the houses on Harris Street.

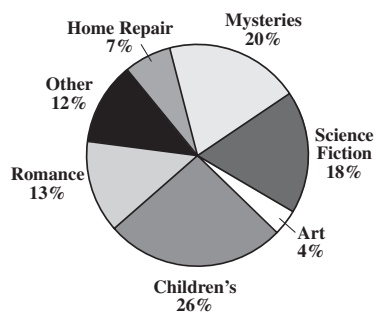
620, 570, 570, 590, 560, 640, 590, 590, 580

What is the mode of these data?

- A 560  
B 580  
C 590  
D 640

M12248

40. The Smithburg town library wanted to see what types of books were borrowed most often.



According to the circle graph shown above—

- A more Children's books were borrowed than Romance and Science Fiction combined.  
B more than half of the books borrowed were Children's, Mysteries, and Art combined.  
C more Mysteries were borrowed than Art and Science Fiction combined.  
D more than half of the books borrowed were Romance, Mysteries, and Science Fiction combined.

M02131

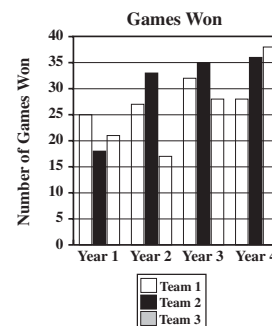
## Statistics, Data Analysis, and Probability

41. Three-fourths of the 36 members of a club attended a meeting. Ten of those attending the meeting were female. Which one of the following questions can be answered with the information given?

- A How many males are in the club?  
B How many females are in the club?  
C How many male members of the club attended the meeting?  
D How many female members of the club did not attend the meeting?

M00261

42. The number of games won over four years for three teams is shown on the graph below.



Which statement is true based on this information?

- A Team 3 always came in second.  
B Team 1 had the best average overall.  
C Team 1 always won more games than Team 3.  
D Team 2 won more games each year than in the previous year.

M10300

43. The table below shows the number of real estate transactions by type for a city.

Real Estate Transactions

Type of Property Sold	Number of Sales
Single-Family Residence	157
Condo/Townhouse	17
Mobile Home	6
Multi-Family	2
Commercial	15
Land	255
<b>Total</b>	<b>452</b>

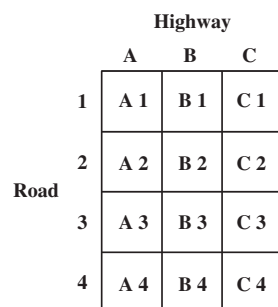
Based on the information in the table, which statement is true?

- A More than half of the sales were single-family residences.  
B More sales occurred for land than in all other areas combined.  
C The number of condo/townhouse sales was more than 10% of the total sales.  
D The number of mobile home and multi-family sales combined was twice the number of commercial sales.

M21303

## Statistics, Data Analysis, and Probability

44. To get home from work, Curtis must get on one of the three highways that leave the city. He then has a choice of four different roads that lead to his house. In the diagram below, each letter represents a highway, and each number represents a road.



If Curtis randomly chooses a route to travel home, what is the probability that he will travel Highway B and Road 4?

- A  $\frac{1}{16}$   
 B  $\frac{1}{12}$   
 C  $\frac{1}{4}$   
 D  $\frac{1}{3}$

M02512

45. The table below shows all of the possible outcomes when flipping three fair coins at the same time.

First Coin	Second Coin	Third Coin
H	H	H
H	H	T
H	T	H
H	T	T
T	H	H
T	H	T
T	T	H
T	T	T

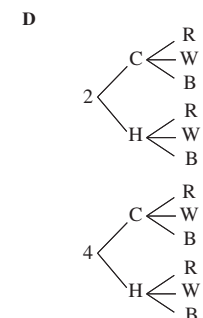
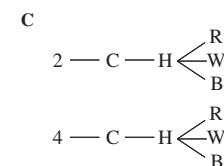
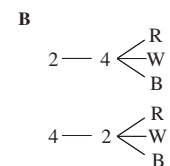
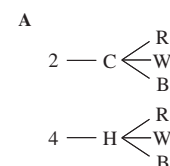
Which of the following statements must be true?

- A The probability that exactly two coins have the same outcome is  $\frac{1}{2}$ .  
 B The probability of getting exactly one tail is higher than getting exactly two tails.  
 C The probability of getting at least one head is higher than the probability of getting at least one tail.  
 D The probability that all of the coins will land on heads is the same as the probability that all of the coins will land on tails.

M13243

## Statistics, Data Analysis, and Probability

46. Carmen wants to buy a new car. Her choices are a 2-door or a 4-door, a convertible top or a hard top, and red, white, or black. Which of the following tree diagrams represents all the possible choices for the car?



M00406

## Statistics, Data Analysis, and Probability

47. A restaurant is advertising 3-item combination specials that must include a main dish, a vegetable, and a drink.

## Lunch Specials

Main Dish	Vegetable	Drink
Chicken	Broccoli	Water
Beef	Carrots	Soft drink
	Peas	Milk
	Corn	

How many 3-item combinations include a soft drink and corn?

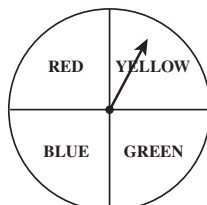
- A 2  
B 3  
C 4  
D 8

M13738

48. A bucket contains 3 bottles of apple juice, 2 bottles of orange juice, 6 bottles of tomato juice, and 8 bottles of water. If Kira randomly selects a bottle, what is the probability that she will select a drink other than water?

- A  $\frac{3}{4}$   
B  $\frac{11}{19}$   
C  $\frac{8}{19}$   
D  $\frac{1}{4}$

M11379



49. The spinner shown above is fair. What is the probability that the spinner will NOT stop on red if you spin it one time?

- A  $\frac{1}{4}$   
B  $\frac{1}{3}$   
C  $\frac{3}{4}$   
D  $\frac{4}{3}$

M10094

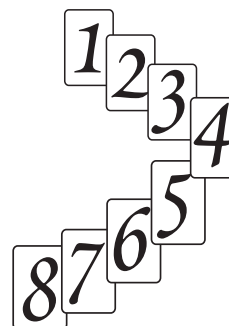
50. Fran has 16 CDs in a box: 6 country, 6 rock, 2 dance, and 2 classical. If she takes out one CD without looking, what is the probability that she will pick a rock or country CD?

- A 25%  
B 50%  
C 75%  
D 100%

M12305

## Statistics, Data Analysis, and Probability

51. These 8 cards are placed face down and shuffled.



If Beatrice turns over only one card, what is the probability she will get a card with a number less than 4?

- A  $\frac{1}{4}$   
B  $\frac{3}{8}$   
C  $\frac{1}{2}$   
D  $\frac{5}{8}$

M25304

52. Mr. Gulati is holding five cards numbered 1 through 5. He has asked five students to each randomly pick a card to see who goes first in a game. Whoever picks the card numbered 5 goes first. Juanita picks first, gets the card numbered 4, and keeps the card. What is the probability that Yoko will get the card numbered 5 if she picks second?

- A  $\frac{1}{2}$   
B  $\frac{1}{3}$   
C  $\frac{1}{4}$   
D  $\frac{1}{5}$

M02145

53. A bag contained four green balls, three red balls, and two purple balls. Jason removed one purple ball from the bag and did NOT put the ball back in the bag. He then randomly removed another ball from the bag. What is the probability that the second ball Jason removed was purple?

- A  $\frac{1}{36}$   
B  $\frac{1}{9}$   
C  $\frac{1}{8}$   
D  $\frac{2}{9}$

M03097

## Statistics, Data Analysis, and Probability

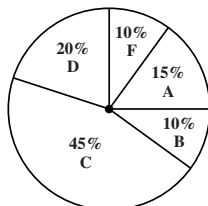
54. Anna has the letter tiles below in a bag.

S T A T I S T I C S

She reached in the bag and pulled out an S. She then put the tile back in the bag. If Anna randomly selects a tile from the bag, what is the probability she will select an S again?

- A  $\frac{1}{5}$   
 B  $\frac{2}{9}$   
 C  $\frac{3}{10}$   
 D  $\frac{1}{3}$

M25311



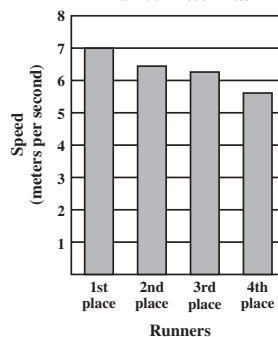
55. The circle graph shown above represents the distribution of the grades of 40 students in a certain geometry class. How many students received As or Bs?

- A 6  
 B 10  
 C 15  
 D 20

M00300

## Statistics, Data Analysis, and Probability

Speed of Four Runners  
in a 100-Meter Dash

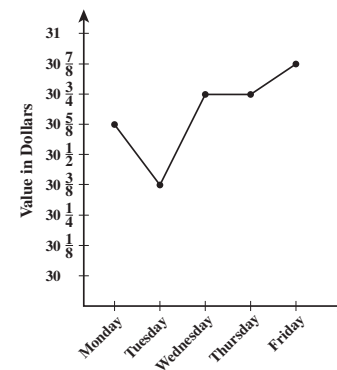


56. Based on the bar graph shown above, which of the following conclusions is true?

- A Everyone ran faster than 6 meters per second.  
 B The best possible rate for the 100-meter dash is 5 meters per second.  
 C The first-place runner was four times as fast as the fourth-place runner.  
 D The second-place and third-place runners were closest in time to one another.

M00279

57. The graph below represents the closing price of a share of a certain stock for each day of a week.



Which day had the greatest increase in the value of this stock over that of the previous day?

- A Tuesday  
 B Wednesday  
 C Thursday  
 D Friday

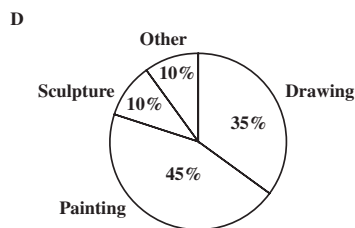
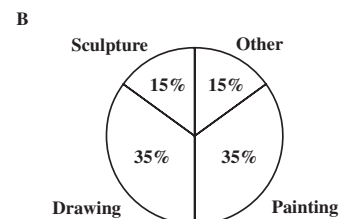
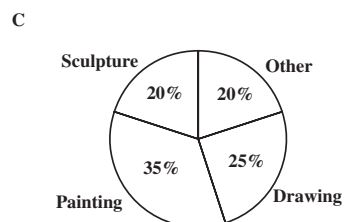
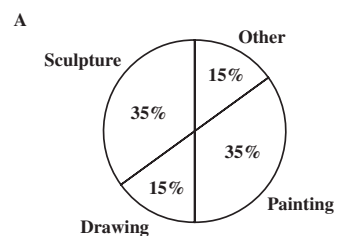
M00295

**Statistics, Data Analysis, and Probability**

58. The students at a high school were asked to name their favorite type of art. The table below shows the results of the survey.

Art Survey	
Type of Art	Number of Students
Painting	714
Drawing	709
Sculpture	296
Other	305

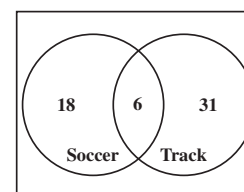
Which circle graph BEST shows these data?



M13053

**Statistics, Data Analysis, and Probability**

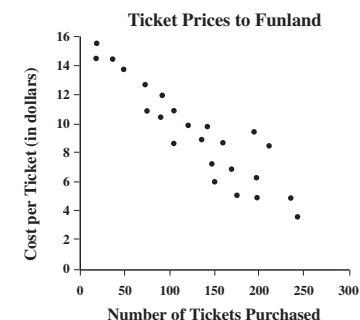
59. The Venn diagram below shows the number of girls on the soccer and track teams at a high school.



How many girls are on both the soccer and track teams?

- A 6  
B 12  
C 49  
D 55

M21162



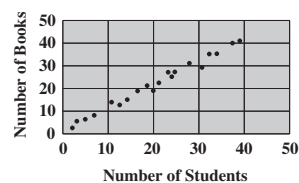
60. The cost of a ticket to Funland varies according to the season. Which of the following conclusions about the number of tickets purchased and the cost per ticket is BEST supported by the scatterplot above?
- A The cost per ticket increases as the number of tickets purchased increases.  
B The cost per ticket is unchanged as the number of tickets purchased increases.  
C The cost per ticket decreases as the number of tickets purchased increases.  
D There is no relationship between the cost per ticket and the number of tickets purchased.

M02208

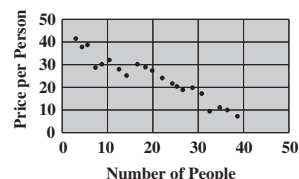
## Statistics, Data Analysis, and Probability

61. Which scatterplot shows a negative correlation?

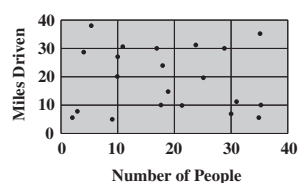
A



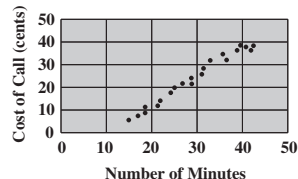
B



C



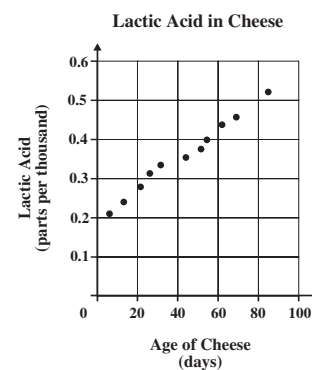
D



M102546

## Statistics, Data Analysis, and Probability

62. The scatterplot below shows the time cheese has been aging and the amount of lactic acid present in the cheese.

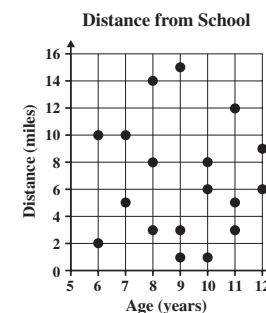


Which statement is MOST strongly supported by the scatterplot?

- A The longer cheese ages, the more lactic acid is present.
- B The longer cheese ages, the less lactic acid is present.
- C The amount of lactic acid present remains constant as cheese ages.
- D No relationship exists between the time cheese ages and the amount of lactic acid present.

M12077

63. The scatterplot below shows the ages of some children and the distance each child lives from school.



Which statement BEST describes the relationship between age and distance from school?

- A As age increases, the distance from school increases.
- B As age increases, the distance from school decreases.
- C As age increases, the distance from school remains constant.
- D There is no relationship between age and distance from school.

M10565