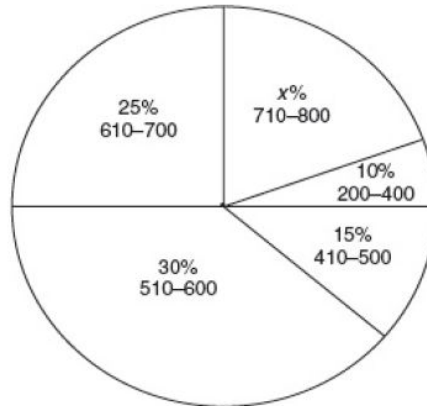


## SAT PREP

### Assignment : Data Analysis

#### SAT Math Scores at Cedar Lane High School



Questions 1 and 2 refer to the graph above.

1. If there are 72 SAT Math scores between 510 and 600, how many SAT Math scores are above 700?  
(A) 40  
(B) 48  
(C) 56  
(D) 64
2. If 20% of the students with SAT Math scores from 610 to 700 received college scholarships, how many students with SAT Math scores from 610 to 700 received college scholarships?  
(A) 12  
(B) 18  
(C) 30  
(D) 48

Minimum Age Requirement (years)	Number of States
14	7
15	12
16	27
17	2
18	2

Questions 3 and 4 refer to the table above.

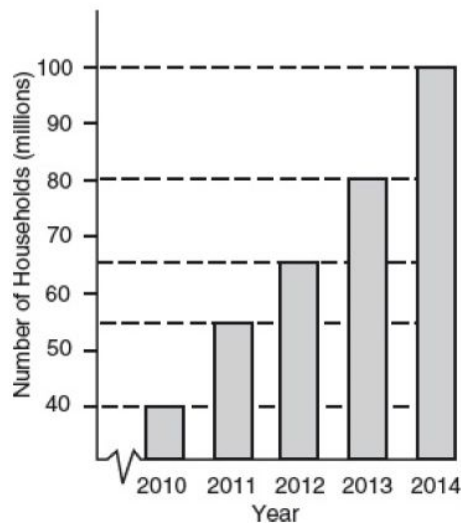
3. The table above shows the minimum age requirement for obtaining a driver's license. In what percent of the states can a person obtain a driver's license before the age of 16?

- (A) 94%
- (B) 47%
- (C) 38%
- (D) 19%

4. If a state is chosen at random, what is the probability that the minimum age for obtaining a driver's license in that state will be at least 16?

- (A)  $\frac{1}{25}$
- (B)  $\frac{2}{25}$
- (C)  $\frac{19}{50}$
- (D)  $\frac{31}{50}$

Growth of Laptop Computers in U.S. Households

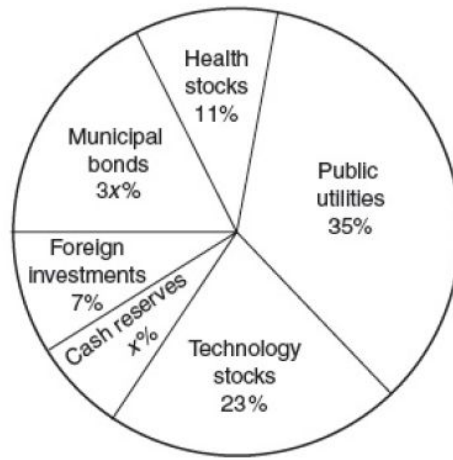


Questions 5 and 6 refer to the graph above.

The graph above shows the number of U.S. households with laptop computers for the years 2010 to 2014.

5. What was the percent of increase in the number of households with laptops from 2010 to 2014?
- (A) 40%
  - (B) 60%
  - (C) 120%
  - (D) 150%
6. The greatest percent of increase in the number of households with laptops occurred in which two consecutive years?
- (A) 2010 to 2011
  - (B) 2011 to 2012
  - (C) 2012 to 2013
  - (D) 2013 to 2014

**Investment Portfolio Valued at \$250,000**

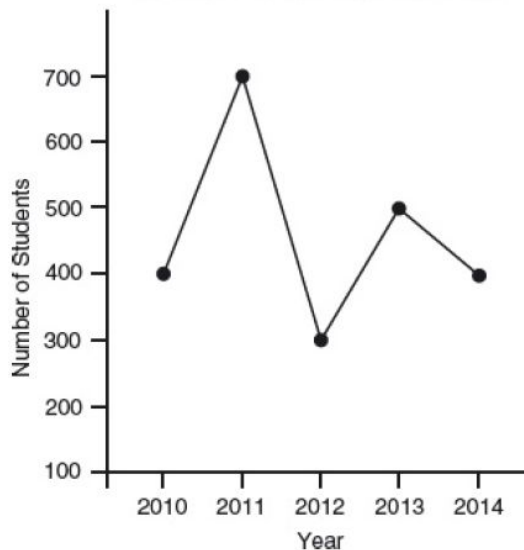


**Questions 7 and 8** refer to the graph above.

The graph above shows how \$250,000 is invested.

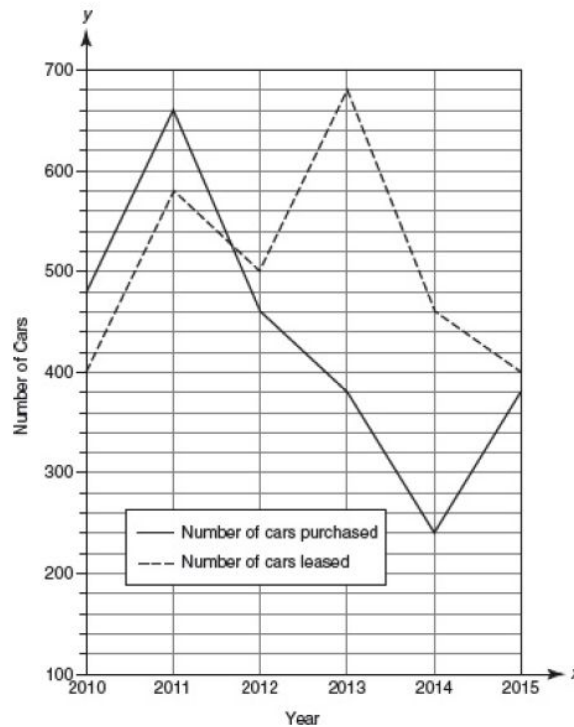
- How much money is invested in municipal bonds?  
(A) \$45,000  
(B) \$37,500  
(C) \$35,000  
(D) \$30,000
- After 20% of the amount that is invested in technology stocks is reinvested in health stocks, how much money is invested in health stocks?  
(A) \$77,500  
(B) \$65,000  
(C) \$45,000  
(D) \$39,000

**Number of Students Enrolled  
In Advanced Mathematics Courses**



Questions 9 and 10 refer to the graph above.

9. The percent increase in the number of students enrolled in advanced mathematics courses from 2010 to 2011 exceeded the percent increase from 2012 to 2013 by approximately what percent?
- (A) 133  
(B) 75  
(C) 67  
(D) 8
10. From 2014 to 2015 the number of students enrolled in advanced mathematics courses increased by the same percent that student enrollment in advanced mathematics courses dropped from 2013 to 2014. What was the approximate number of students enrolled in advanced mathematics courses in 2015?
- (A) 420  
(B) 440  
(C) 450  
(D) 480

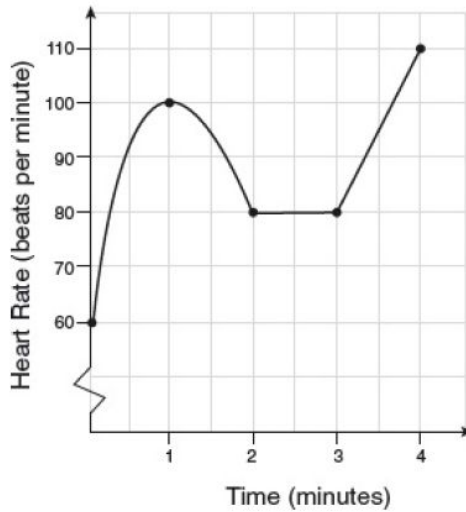


Questions 11 and 12 refer to the graph above.

11. In 2012, the number of cars purchased was  $x$  percent of the number of cars leased. What is the best approximation for  $x$ ?
- (A) 75  
(B) 80  
(C) 85  
(D) 90

12. Which of the following is the best approximation for the decrease in the number of cars purchased per year between 2011 and 2014?

- (A) 105
- (B) 140
- (C) 300
- (D) 420



Questions 13 and 14 refer to the graph above which shows the heart rate, in beats per minute, of a jogger during a 4-minute interval.

13. Over what interval of time, in minutes, was the jogger's heart rate changing at a constant rate?

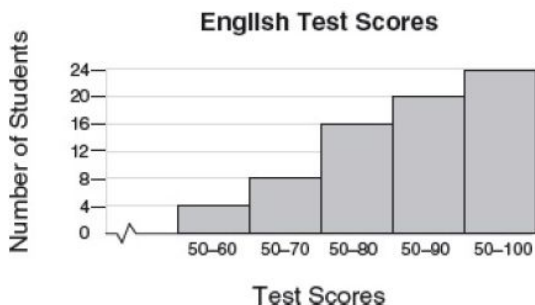
- (A) 0 to 1
- (B) 1 to 2
- (C) 2 to 3
- (D) 3 to 4

14. The greatest percent of increase in the jogger's heart rate occurred over what interval of time, in minutes?

- (A) 0 to 1
- (B) 1 to 2
- (C) 2 to 3
- (D) 3 to 4

HEAD CIRCUMFERENCE GROWTH SPEED	
Age	Growth of Head Circumference (in centimeters)
First year	$\text{Circumference} = \frac{\text{Height} + 12}{2}$
1 to 3 years	1 centimeter every 6 months
3 to 5 years	1 centimeter every year

15. The table above can be used to approximate the circumference of the head, in centimeters, during the first 5 years after birth. At 5 years of age, Jacob's head circumference was 81 cm. Based on the table, what was his approximate height, in centimeters, at 1 years old?
- (A) 138  
 (B) 145  
 (C) 152  
 (D) 157

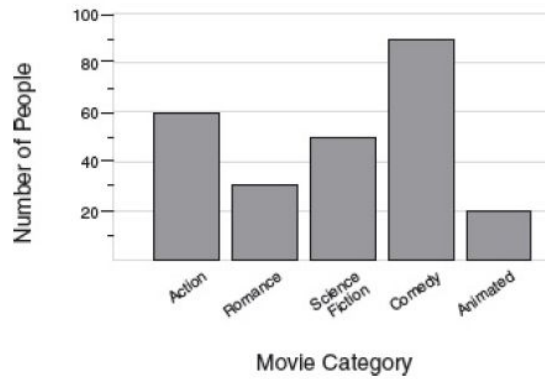


16. The cumulative histogram above shows the distribution of scores that 24 students received on an English test. If a student is selected at random, what is the probability that the student will have a score between 71 and 80?
- (A)  $\frac{1}{6}$   
 (B)  $\frac{1}{3}$   
 (C)  $\frac{1}{2}$   
 (D)  $\frac{2}{3}$

Gender	Tennis Team		Total
	Juniors	Seniors	
Male	14	11	25
Female	5	10	15
Total	19	21	40

17. The table above shows the composition of a coed high school tennis team with a total of 40 members. A player who will be selected at random from the team will be given two free tickets to attend the U.S. Open Tennis Tournament. What is the probability that the tickets will be given to either a female junior player or a male senior player?
- (A)  $\frac{1}{8}$   
 (B)  $\frac{1}{4}$   
 (C)  $\frac{2}{5}$   
 (D)  $\frac{1}{2}$

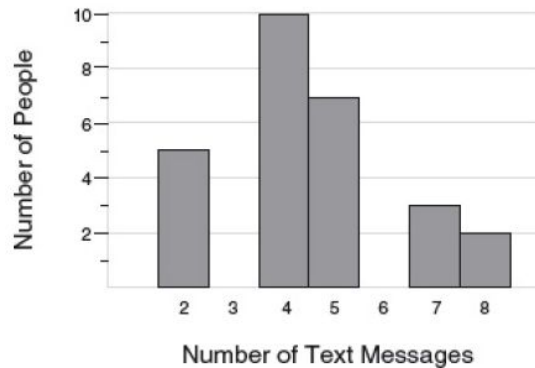
Survey of 250 People Exiting a Movie Theater



Questions 1 and 2 refer to the graph above that summarizes a survey of a group of 250 people who were randomly selected when leaving a multiplex movie theater and asked what type of movie they had seen.

1. What percent of the people surveyed saw either an action or a science fiction movie?
2. If a total of 1,700 tickets were sold for the five types of movies represented in the histogram, what is the best estimate for the number of tickets sold to the Romance movie?

Number of Text Messages Sent In a Day

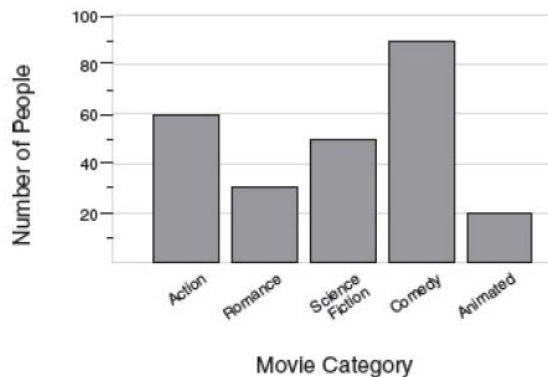


3. The histogram above shows the number of mobile text messages sent by a randomly selected group of 27 people on a given day. The average number of text messages sent per person is closest to what whole number?

Grade	1 Club	2 Clubs	3 or More Clubs	Total
9th	37	43	18	98
10th	48	38	22	108
11th	52	27	31	110
12th	75	30	29	134
Total	212	138	100	450

Questions 4–6 refer to the above table, which summarizes the results of a survey of the student body of a high school about club membership in which each student enrolled in the high school enumerated the clubs in which they were members.

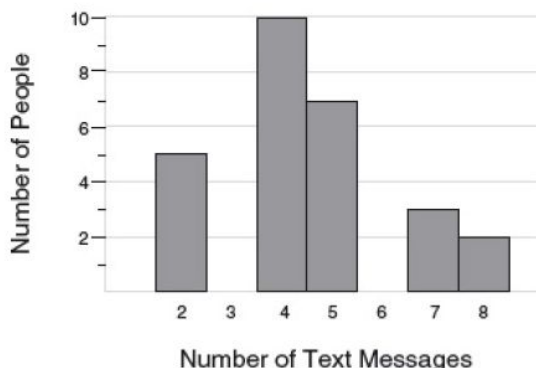
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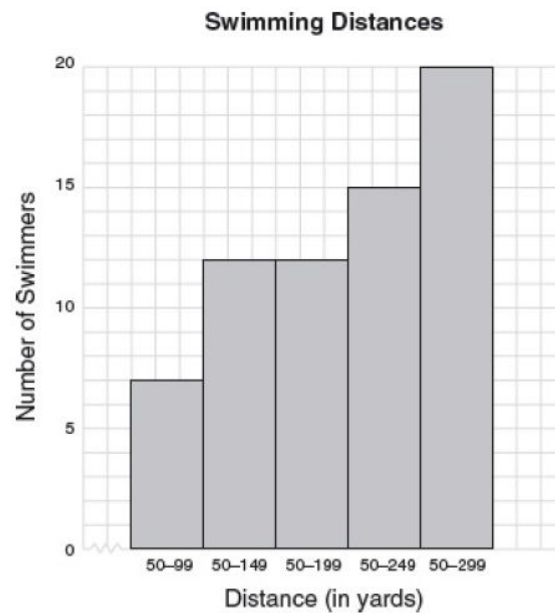
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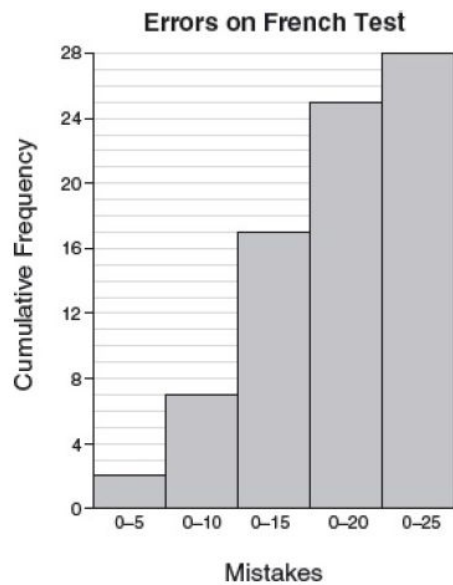
4. If a student is selected at random, what is the probability that the student does not belong to 3 or more clubs?
5. If 28% of the students who are enrolled in this school belong to at least two clubs, how many students who are enrolled in this school did *not* participate in the survey?
6. If a student is selected at random, what is the probability that the student is either a 9th grade student or belongs to 3 or more clubs?

Gender	Eye Color			Total
	Brown	Hazel	Blue	
Male		13		
Female		32		
Total	133			200

7. The partially completed table above describes the distribution of 200 subjects in a study involving eye color in which there were 4 times as many males with brown eyes as with blue eyes and 7 times as many females with brown eyes as with blue eyes. What percent of the subjects were either male with blue eyes or female with brown eyes?



8. Based on the cumulative histogram above, what percent of the total number of swimmers swam between 200 and 249 yards?



9. The cumulative histogram above shows the distribution of mistakes 28 students in a French language class made on a test. What is the probability that a student selected at random made more than 10 mistakes?