

## Additional Averages

1. Stefan's scores on his English essays were 75, 65, 80, 95, and 65. What is the average of his test scores?

65

66

71

76

ACT Test Study Guide with Practice Questions

2. The five events hosted last year by the event company, "We Plan It," drew crowds of 175, 320, 417, 533, and 210 people. What is their average attendance for those events?

231

271

331

371

3. Karen received scores of 74, 63, 61, 42, 90, and 78 on her math tests. What was Karen's average score for these six tests?

64

66

68

70

4. What is the mode of the following numbers: 21, 32, 21, 19, 23, 26, 22, and 18?

21

21.5

22.75

32

Questions 5 and 6 are based upon the following table:

Kyle bats third in the batting order for the Badgers baseball team. The table shows the number of hits that Kyle had in each of 7 consecutive games played during one week in July.

7. For the number set  $\{7, 12, 5, 16, 23, 44, 18, 9, Z\}$ , which of the following values could be equal to  $Z$  if  $Z$  is the median of the set?

14

11

18

17

21

8. The weight in pounds of five students is 112, 112, 116, 133, 145. What is the median weight of the group?

123.6

116

112

118.5

140

9. A traveler on vacation spent \$25 on food during the first week; for each of the next two weeks he spent \$52; and the last week he spent \$34. What was his average weekly food expenditure while he was on vacation?

\$ 37.00

\$ 38.25

\$ 40.75

\$ 52.00

10. If four friends had an average score of 92 on a test, what was Annie's score if Bill got an 86, Clive got a 98, and Demetrius got a 90?

88

90

92

94

96

#### Answers and Explanations

1. D: To find the average, divide the sum of the terms by the number of terms:

$$(75 + 65 + 80 + 95 + 65)/5 = 76.$$

2. C: To find the average, divide the sum of the terms by the number of terms:

$$(175 + 320 + 417 + 533 + 210)/5 = 331.$$

3. C: To find the average, divide the sum of the terms by the number of terms:

$$(74 + 63 + 61 + 42 + 90 + 78)/6 = 408/6 = 68.$$

4. A: The mode is the number that occurs most often. Only 21 occurs more than once in this data set, Choice A.

7. A: The median of a set of numbers is one for which the set contains an equal number of greater and lesser values. Besides Z, there are 8 numbers in the set, so that 4 must be greater and 4 lesser than Z. The 4 smallest values are 5, 7, 9, and 12. The 4 largest are 16, 18, 23, and 44. So Z must fall between 12 and 16.

8. B: The median is the value in a group of numbers that separates the upper half from the lower half, so that there are an equal number of values above and below it. In this distribution, there are two values greater than 116, and two values below it.

Note that Choice A is the mean, or average of the distribution, not the median.

Choice C is the most common value, or mode of the distribution, not the median.

D and E are simply values within the range of the distribution. They are not the median.

$$9. C: (\$25 + \$52 + \$52 + \$34)/4 = \$163/4 = \$40.75$$

10. D: This is a simple average problem. If x denotes Annie's score, then  $(86+98+90+x)/4 = 92$ . To solve, multiply each side by 4 and add the known scores together to get  $274 + x = 368$ . Subtract 274 from 368 to solve for x.  $x = 94$ .