

Name: _____

Date: _____ Per: _____

Averages Study Guide

1. In the spring semester of her math class, Katie's test scores were 108, 81, 79, 99, 85, and 82. What was her average test score in the spring semester?

Know	Want to find	My answer should represent:

Skills Needed:

2. To determine a student's overall test score for the semester, Ms. Lopez throws out the lowest test score and takes the average of the remaining test scores. Victor earned the following test scores in Ms. Lopez's class this semester: 62, 78, 83, 84, and 93. What overall test score did Victor earn in Ms. Lopez's class this semester?

Know	Want to find	My answer should represent:

Skills Needed:

3. Point X is located at -15 on the real number line. If point Y is located at -11, what is the midpoint of line segment XY?

Know	Want to find	My answer should represent:

Skills Needed:

Name: _____

Date: _____ Per: _____

Averages Study Guide

4. In the standard (x,y) coordinate plane, a line segment has its endpoints at $(3,6)$ and $(9,4)$. What are the coordinates of the midpoint of the line segment?

Know	Want to find	My answer should represent:

Skills Needed:

5. In the standard (x,y) coordinate plane, point M with coordinates $(5,4)$ is the midpoint of AB, and B has coordinates $(7,3)$. What are the coordinates of A?

Know	Want to find	My answer should represent:

Skills Needed:

6. In the standard (x,y) coordinate plane, the midpoint of AB is $(4,-3)$ and A is located at $(1,-5)$. If (x,y) are the coordinates of B, what is the value of $x+y$?

Know	Want to find	My answer should represent:

Skills Needed:

Name: _____

Date: _____ Per: _____

Averages Study Guide

7. The coordinates of endpoints of CD, in the standard (x,y) coordinate plane, are (-4,-2) and (14,2). What is the x-coordinate of the midpoint of CD?

Know	Want to find	My answer should represent:

Skills Needed:

8. The mean of 4 numbers in a data set is 7. If 3 of these numbers are 2, 4, and 10, what is the fourth number?

Know	Want to find	My answer should represent:

Skills Needed:

Name: _____

Date: _____ Per: _____

Averages Study Guide

9. Tom has taken 5 of the 8 equally weighted tests in his US History class this semester, and he has an average score of exactly 78.0 points. How many points does he need to earn on his 6th test to bring his average score up to exactly 80.0 points?

Know	Want to find	My answer should represent:

Skills Needed:

10. Marlon is bowling in a tournament and has the highest average after 5 games, with scores of 210, 225, 254, 231, and 280. In order to maintain this exact average, what *must* be Marlon's score for his 6th game?

Know	Want to find	My answer should represent:

Skills Needed:

Name: _____

Date: _____ Per: _____

Averages Study Guide

11. Yunyun swam 4 laps and her coach recorded her time for each as 43.4 seconds, 44.1 seconds, 42.9 seconds, and 45.4 seconds, respectively, for a total of 175.8 seconds. If Yunyun must swim her 5th lap in x seconds in order to make her average time for all 5 laps 43 seconds, then which of the following equations could be solved for the correct value of x ?

a.
$$\frac{175.8+x}{5} = \frac{43}{60}$$

b.
$$\frac{175.8+x}{5} = 43$$

c.
$$\frac{175.8+x}{4} = 43$$

d.
$$\frac{175.8}{5} + x = 43$$

e.
$$\frac{175.8}{4} + x = 43$$

Know	Want to find	My answer should represent:

Skills Needed:

12. The mean of 5 numbers is 87. The smallest of the 5 numbers is 75. What is the mean of the other 4 numbers?

Know	Want to find	My answer should represent:

Skills Needed:

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Date: _____ Per: _____

Averages Study Guide

13. Mr. Baylor spent 6 days grading 996 essays. He averaged 178 essays per day for the first 3 days. What is his average speed, in essays graded per day, for the final 3 days?

Know	Want to find	My answer should represent:

Skills Needed:

14. Andy has 30 collectible comic books, which he bought in 2005 for \$28.95 each. These comic books are currently valued at \$34.35 each. Andy will sell these 30 comic books when their combined value is exactly \$600.00 more than he paid for them. How much more will the average value per comic book have risen when Andy sells these 30 comic books?

Know	Want to find	My answer should represent:

Skills Needed:

Name: _____

Date: _____ Per: _____

Averages Study Guide

15. The table below shows the total number of goals scored in each of 43 soccer matches in a regional tournament. What is the average number of goals scored per match, to the nearest 0.1 goal?

Total number of goals in a match	Number of matches with this total
0	4
1	10
2	5
3	9
4	7
5	5
6	1
7	2

Know	Want to find	My answer should represent:

Skills Needed:

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Date: _____ Per: _____

Averages Study Guide

16. To increase the mean of 4 numbers by 2, by how much would the sum of the 4 numbers have to increase?

Know	Want to find	My answer should represent:

Skills Needed:

Skills Bank:

- Find the average of a set of numbers
- Find the midpoint of two numbers or two points on a coordinate plane.
- If given the midpoint and one endpoint, I can find the other endpoint
- If given the average and most values, I can find the missing value.
- Use the knowledge of averages to find the average of remaining numbers.
- Use the knowledge of averages and their connection with sums to identify how changing averages affects the sum.