

Averages and Rounding

1. Round 907.457 to the nearest tens place.

- A. 908.0
- B. 910
- C. 907.5
- D. 900
- E. 907.46

2. At a certain high school, the respective weights for the following subjects are:

Mathematics 3, English 3, History 2, Science 2 and Art 1.

What is a student's average whose marks were the following: Geometry 89, American Literature 92, American History 94, Biology 81, and Sculpture 85?

- A. 85.7
- B. 87.8
- C. 88.9
- D. 89.4
- E. 90.2

3. Ginger over the course of an average work-week wanted to see how much she spent on lunch daily. She spent \$5.43 on Monday, and the same amount on Thursday. On Tuesday and Wednesday, she spent \$3.54 each day. On Friday, she spent \$7.89 on lunch. What was her average daily cost?

- A. \$3.19

- B. \$3.75
- C. \$3.90
- D. \$5.17
- E. \$4.23

4. What is 1230.932567 rounded to the nearest hundredths place?

- A. 1200
- B. 1230.9326
- C. 1230.93
- D. 1230
- E. 1230.933

5. Subtract the following numbers rounded to the nearest tenths place.

134.679

-45.548

-67.8807

- A. 21.3
- B. 21.25
- C. -58.97
- D. -59.0
- E. 1

6. What is the absolute value of -9?

- A. -9
- B. 9
- C. 0
- D. -1
- E. 1

7. What is the median of the following list of numbers? 4, 5, 7, 9, 10, 12

- A. 6
- B. 7.5
- C. 7.8
- D. 8
- E. 9

8. What is the mathematical average of the number of weeks in a year, seasons in a year, and the number of days in January?

- A. 36
- B. 33
- C. 32
- D. 31
- E. 29

9. In a college, some courses contribute more towards an overall GPA than other courses. For example, a science class is worth 4 points; mathematics is worth 3 points; history is worth 2 points; and English is worth 3 points. The values of the grade letters are as follows, A= 4, B=3, C=2, D=1, F=0. What is the GPA

of a student who made a "C" in Trigonometry, a "B" in American History, an "A" in Botany, and a "B" in Microbiology?

- A. 2.59
- B. 2.86
- C. 3.08
- D. 3.33
- E. 3.67

10. Over the course of a week, Fred spent \$28.49 on lunch. What was the average cost per day?

- A. \$4.07
- B. \$3.57
- C. \$6.51
- D. \$2.93
- E. \$5.41

11. A roast was cooked at 325° F in the oven for 4 hours. The internal temperature rose from 32° F to 145° F. What was the average rise in temperature per hour?

- A. 20.2° F/hr
- B. 28.25° F/hr
- C. 32.03° F/hr
- D. 37° F/hr
- E. 37.29° F/hr

12. In the number 743.25 which digit represents the tenths space?

- A. 2
- B. 3
- C. 4
- D. 5
- E. 6

Answers & Explanations

1. B: When rounding the decimal to the nearest tens place, look to the digit that is one place to the right, or the ones place. Since the digit in the ones place is greater than 5, the number will be rounded up to the next 10, giving a rounded number of 910.

2. C: The weighted average may be written as $(3.89)+(3.92)+(2.94)+(2.81)+(1.85)/11$, which is approximately 88.9.

3. D: The average daily cost may be written as $5.43+5.43+3.54+3.54+7.89/5$, which equals 5.17. The average daily cost was \$5.17.

4. C: When rounding the decimal to the nearest hundredths place, look to the digit that is one place to the right, or the thousandths place. Since the digit in the thousandths place is less than 5, the digit in the hundredths place will remain. Thus, the rounded number is 1230.93.

5. A: The decimals of 45.5 and 67.9 should be subtracted from the decimal, 134.7. Doing so gives a difference of 21.3.

6. B: The absolute value of a number is the distance the number is from 0. The integer, -9, is 9 units from the whole number, 0. Thus, it has an absolute value of 9.

7. D: Since this list (already written in ascending order) has an even number of values, the median is the average of the two middle values. The average of 7 and 9 is 8, thus the median is 8.

8. E: Since there are 52 weeks and 4 seasons in a year and 31 days in January, the average may be written as $52+4+31/3$, which equals 29.

9. C: The GPA may be written as $(4.4)+(4.3)+(2.3)+(3.2)/13$, where 13 represents the sum of the weights. Thus, the GPA is approximately 3.08.

10. A: The average is equal to the ratio of the amount spent to the number of days in a week. Thus, the average may be written as $28.49/7$. He spent an average of \$4.07 per day.

11. B: The rate may be written as $145-32/4$, which equals 28.25. Thus, the average rise in temperature per hour was 28.25°.

12. A: The tenths place is one place to the right of the decimal. Thus, 2 represents the digit in the tenths place.