

## 2025 August AMC 10 Week 1 Day 3 - Mean, Median and Mode

1

(1分) There are two groups of numbers. The average of the first group is **12.8**, and the average of the second group is **10.2**. The overall average of the two groups combined is **12.02**.

What is the ratio of the number of elements in the second group to that in the first group?

A.  $\frac{3}{7}$

B.  $\frac{7}{3}$

C.  $\frac{2}{7}$

D.  $\frac{7}{2}$

E.  $\frac{2}{3}$

2

(1分) A data set containing **20** numbers, some of which are **6**, has mean **45**. When all the **6**s are removed, the data set has mean **66**. How many **6**s were in the original data set?

A. 4

B. 5

C. 6

D. 7

E. 8

3

(1分) Jane plans to enter the numbers  $1, 2, \dots, N$  into the computer to calculate their average. When she thought she had finished entering the numbers, the computer showed that only  $(N - 1)$  numbers had been entered, and the average was  $35\frac{5}{7}$ . Assuming the  $(N - 1)$  numbers were entered correctly, what is the missing number?

A. 10

B. 53

C. 56

D. 65

E. 67

4

(1分) Mr. Wang wrote a sequence of consecutive natural numbers starting from **1** on the blackboard: **1, 2, 3, 4, ...**. Then he erased three numbers, two of which were prime numbers. If the average of the remaining numbers is  $19\frac{8}{9}$ , what is the maximum possible sum of the two prime numbers that were erased?

A. 40

B. 50

C. 60

D. 70

E. 80

5

(1分) In a math competition, the top **60** students received awards. Originally, there were **5** first prize winners, **15** second prize winners, and **40** third prize winners. After an adjustment, the numbers changed to **10** first prize winners, **20** second prize winners, and **30** third prize winners.

After the adjustment:

The average score of first prize winners decreased by **3** points,

The average score of second prize winners decreased by **2** points,

The average score of third prize winners decreased by **1** point.

If the original average score of second prize winners was **7** points higher than that of third prize winners, how many points higher is the adjusted average score of first prize winners compared to that of second prize winners?

A. 1

B. 2

C. 3

D. 4

E. 5