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STATS MEAN MEDIAN MODE

2012A 13. An *iterative average* of the numbers 1, 2, 3, 4, and 5 is computed in the following way. Arrange the five numbers in some order. Find the mean of the first two numbers, then find the mean of that with the third number, then the mean of that with the fourth number, and finally the mean of that with the fifth number. What is the difference between the largest and smallest possible values that can be obtained using this procedure?

(A) $\frac{31}{16}$ (B) 2 (C) $\frac{17}{8}$ (D) 3 (E) $\frac{65}{16}$

2000

14. Mrs.Walter gave an exam in a mathematics class of five students. She entered the scores in random order into a spreadsheet, which recalculated the class average after each score was entered. Mrs.Walter noticed that after each score was entered, the average was always an integer. The scores (listed in ascending order) were 71, 76, 80, 82, and 91. What was the last scores Mrs.Walter entered?

(A) 71 **(B)** 76 **(C)** 80 **(D)** 82 **(E)** 91

2005A

14. How many three-digit numbers satisfy the property that the middle digit is the average of the first and the last digits?

(A) 41 **(B)** 42 **(C)** 43 **(D)** 44 **(E)** 45

2010B

14. The average of the numbers $1, 2, 3, \ldots, 98, 99$, and x is $100x$. What is x?

(A) $\frac{49}{101}$ **(B)** $\frac{50}{101}$ **(C)** $\frac{1}{2}$ **(D)** $\frac{51}{101}$ **(E)** $\frac{50}{99}$

2018B

14. A list of 2018 positive integers has a unique mode, which occurs exactly 10 times. What is the least number of distinct values that can occur in the list?

(A) 202 (B) 223 (C) 224 (D) 225 (E) 234