



Math Olympiad and Problem Solving Programs
E220 - Intermediate Math Competitions
Problem Set 1.1 - AMC 8 Average

Name:

Date:

1. The smallest possible average will be of the smallest possible numbers. The four smallest positive distinct even integers are 2, 4, 6, 8, and their average is 5. C
2. D
3. C
4. We have a set of five numbers whose median is 5 and mode is 8. So we know so far that the set looks like this: $\{a, b, 5, 8, 8\}$. Since the average is 5, we need to find a and b so that $a + b = 2 + 2 = 4$. Since the ONLY mode is 8, we know a and b have to be different. So they must be 1 and 3. The set is now $\{1, 3, 5, 8, 8\}$. So the difference between the largest and smallest is $8 - 1 = 7$. D
5. B
6. C
7. E
8. D
9. B
10. D