Biostatistics Worksheet 1

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1) Set {x−2 , x+2 , 10 }
If the mean = median , what is x ?
a. 4
b. 6
c. 8
d. 10

Ans : a

2) The numbers {2x−1 , 4x+3 , 3x−1 } have the median equal to 8 . What is x ?
a. 1
b. 2
c. 3
d. 4

Ans : c

3) Let a,b,c be real numbers such that their mean is 7 , and their median is 9 .
What can we conclude about the ordering of a,b,c ?
a. a < 9 < c
b. The largest must be more than 11
c. At least one of them is less than 3
d. Impossible with real numbers .

Ans : c

4) A set has 7 elements. The smallest is (1) , the largest is (13) , and the median is (7) .
What is the maximum possible sum of the set ?
a. 55
b. 57
c. 61
d. 64

Ans : c

5) In a dataset of 101 elements, the 51st number is 50 . If all elements greater than 50 are doubled , what happens to the median ?
a. Increases
b. Decreases
c. Stayes the same
d. Can't be determined

Ans : c

6) Set A has 2n+1 elements, all integers. Which of the following must be true ?
a. The median is the average of the largest and smallest
b. The median is an element of A
c. The median is less than the mean
d. All elements are distinct

Ans : b

7) If median > mean , the distribution is likely?
a. Symmetric
b. Right skewed
c. Left skewed
d. Uniform

Ans : c

8) A set contains these 7 elements: { a, b, c, d, e, f, g} , where a < b < c < d < e < f < g . If d is the median , and a+g = b+f = c+e , what is the value of d in terms of (a) and (g) ?
a. (a+g)/2
b. b+f−d
c. (c+e)/2
d. a+g−d

Ans : a