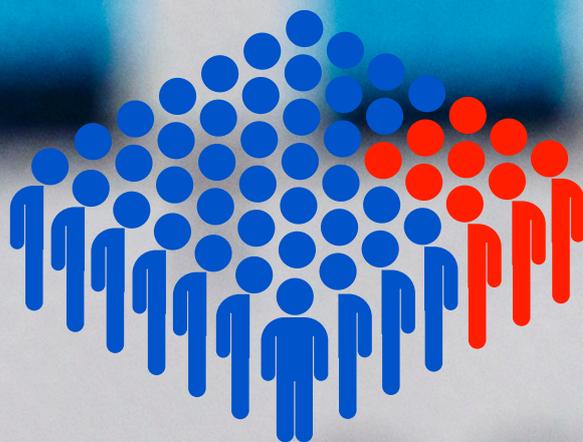


# Biostatistics Worksheet 1

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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 51<sup>st</sup> number is 50 . If all elements greater than 50 are doubled , what happens to the median ?

- a. Increases
- b. Decreases
- c. Stays 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