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CDC wrighting

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Question

Will the mean or median increase if the last number in the data set is increased?

C

Only the mean will change because it is the outlier. The median will not change because it is the middle number.

D

median before changed: $\frac{13+14}{2}$ $\frac{27}{2}$ = (13.5)

$2\overline{)27.0}$ = 13.5

mean before changed: $\frac{11+12+13+14+15+16}{6}$ = 13.5

11, 12, 13, 14, 15, 16 first set

11, 12, 13, 14, 15, 18 increased set

median after increased: $\frac{13+14}{2}$ $\frac{27}{2}$ = (13.5)

~~11~~, ~~12~~, 13, 14, ~~15~~, ~~18~~

mean after increased: $\frac{11+12+13+14+15+18}{6} = \frac{83}{6}$

13.833333333 = 13.83

$\frac{83}{6}$ = 13.8333333

C

Your numbers are 11, 12, 13, 14, 15, 16, before the last number is increased to find the median you put all the numbers in numerical order from least to greatest. In this case they already are. once you have numbers in numerical order you start crossing of the numbers. You cross of the first then the last numbers. Like this ~~11~~, 12, 13, 14, 15, ~~16~~ You do this until you have eighter one number left, and

this is your median. (this only happens if there is an odd set of numbers). If you have an even set of numbers like in this case you will do the same thing but have two numbers. Then you will find the mean. The mean is the other one of the numbers. To do mean you add up all the numbers that you have then you divide the sum by how many numbers you added. (the sum is the answer to an addition problem). In this case you would only add up 13 and 14 since you crossed off all the other numbers. You would write it like this. $\frac{13+14}{2}$

You divide by two because there are two numbers. You add up 13 and 14 to get 27. Then you divide 27 by 2 to get a median of 13.5. Now you find the mean of all the numbers you would do the same thing. You add all the numbers, then divide the sum by how many numbers you added. So you would write it like this. $\frac{11+12+13+14+15+16}{6}$

You add 11, 12, 13, 14, 15, and 16 to get 81 then you divide 81 by 6 because you added up 6 numbers. You should get 13.5. This is your mean. That is how to find mean. Next you find the median of the number set, but the last is increased. In this case it was increased to 18. This will not however effect

the median, because you didn't add or take away any numbers. the median will still be 13.5. This is how it is the same. ~~the~~ 13, 14 ~~is to~~

$\frac{13+14}{2}$ $\frac{27}{2}$ 13.5

The mean however will be affected. Because the last number was changed it affects your sum when you add up all the numbers. This is how you would write it $\frac{11+12+13+14+15+8}{6}$

you would add up 11, 12, 13, 14, 15, 8 to get 83. Know you need to divide 83 by 6, because 83 is the sum and you added up 6 numbers. this is how you get a mean of 13.83333333. you can round that to 13.83. The mean will change if you increase the last number. (The median might change if you decrease or affect any other number ass well as the mean). That is how to find mean and median.