Answer on Question #85450 – Math – Statistics and Probability

Question

a) The arithmetic mean of 10 numbers is 4, when an eleventh number, x is added so that the overall mean is changed to 5. When a twelfth number, y is added the mean changes to 4. Determine the values of x and y

Solution

$\frac{4*10+x}{11} = 5 \rightarrow \ 40 + x = 55 \ \rightarrow \ \ x = 15.$

$\frac{5*11+y}{12} = 4 \ \rightarrow \ \ 55 + y = 48 \ \rightarrow \ \ y = -7.$

Answer: $x = 15, y = -7.$