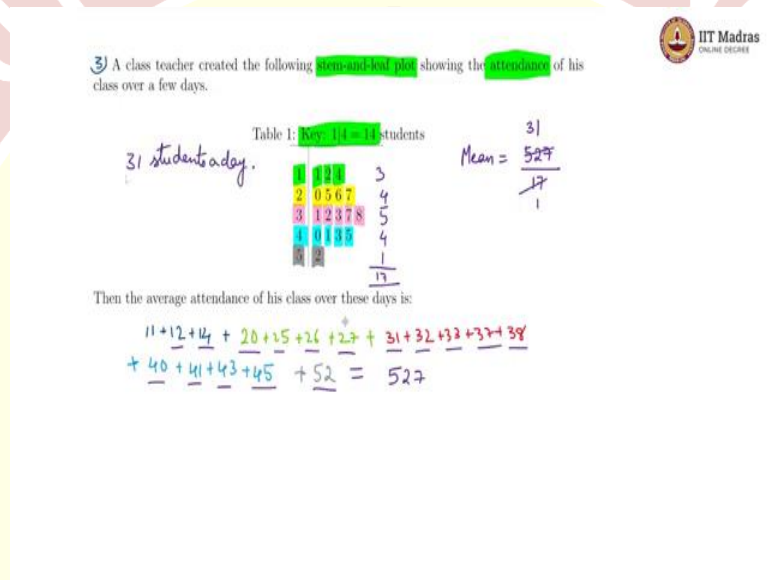


IIT Madras
ONLINE DEGREE

Statistics for Data Science - 1
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Week - 03
Tutorial - 03

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Now third question, there is a stem-and-leaf plot that is shown here. And this is about the attendance of a particular class. There is also a key provider, which shows that $1|4$ is essentially 14 students. So, if this is 1 and this is 4, that would imply 14 students on a particular day, they are asking us the average attendance. That would imply we have to do the sum of all the attendances and let us look at the ones first. So, we have 11 and a 12 and a 14, thus we have

$$11 + 12 + 14 + \dots$$

For the 20s we have 25, 26 and 27. So, $20 + 25 + 26 + 27$. Then further on for the 30s we have 31, 32, 33, 37 and 38. So, we have plus $31 + 32 + 33 + 37 + 38$ and the 40s we have 40, 41, 43 and 45. So, that would be plus $40 + 41 + 43 + 45$. And lastly, we have a 52, so plus 52. The total sum of this we will have to calculate and that is going to be

$11 + 12 = 23$, $23 + 14 = 37$, $37 + 20 = 57$, $57 + 25 = 82$, $82 + 26 = 108$, $108 + 27 = 135$, $135 + 31 = 166$, $166 + 32 = 198$, $198 + 33 = 231$, $231 + 37 = 268$, $268 + 38 = 306$, $306 + 40 = 346$, $346 + 41 = 387$, $387 + 43 = 430$, $430 + 45 = 475$, $475 + 52 = 527$.

Now, we also have to find out how many days have the attendance has been calculated for. So, in the 10s there are 3, in the 20s there are 4, in the 30s there are 5, in the 40s there are 4 again, in the 50s there is only 1. So, a total of $3 + 4 = 7$, $7 + 5 = 12$, $12 + 4 = 16$, $16 + 1 = 17$. So, totally over 17 days. So, our mean would be $\frac{527}{17}$. So, seventeen 1s and seventeen 3s gives us 51 which is also a remainder of 17, so 31. So, the mean is 31 students a day.

