

ASSIGNMENT 2

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SUBJECT: MAT1011 L4
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SLOT : L4

1. Few simple statistical measures:

a) Enter data as 1,2, ... 10.

b) Find sum of the numbers.

c) Find mean, median

d) Find sum of squares of these values.

e) Find the value of $\sum (x_i - \bar{x})^2$. This is known as mean deviation about mean (MDx.

O Check whether MD is less than or equal to standard deviation.

g) Find standard deviation using formula

```
> x=c(1:10)
> print(x)
[1] 1 2 3 4 5 6 7 8 9 10
> print(sum(x))
[1] 55
> print(mean(x))
[1] 5.5
> print(median(x))
[1] 5.5
> ss=x^2
> print(ss)
[1] 1 4 9 16 25 36 49 64 81 100
> sumss=sum(ss)
> print(sumss)
[1] 385
> md=(1/length(x))*(sum(x-mean(x)))
> print(md)
[1] 0
> md=(1/length(x))*(sum(abs(x-mean(x))))
> print(md)
[1] 2.5
```

```
> t=(1/length(x))*(sum((x-mean(x))^2))
> sd=sqrt(t)
> print(sd)
[1] 2.872281
> if(sd>md){print("Sd is greater")}
[1] "Sd is greater"
```