Subject: Central tendencies Assignment Date

1) Find the mean of the following data:

1a)

$$u = \frac{9+7+11+13+2+4+5+5}{8}$$

$$= \frac{56}{8} = 7$$

(b)

$$u = \frac{2.2+10.2+14.7+3.9+4.9+11.1+10.5}{7}$$

$$= \frac{119}{2} \times \frac{1}{7} = 8.5$$

c)

$$u = \frac{11/4 + \frac{21}{2} + \frac{51}{2} + \frac{31}{4} + \frac{21}{2}}{5}$$

$$\Rightarrow \frac{11+42+102+31+42}{\frac{4}{5}}$$

$$\Rightarrow \frac{228}{4} \times \frac{1}{5} = \frac{57}{5} = 11.4$$

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Subject :

Fibonacci numbers using loop

2) Total = 10

Sum = 0

Mean = 0

S = [0, 1]

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for i in range (2, Total):
        S.append (S[i-1] + S[i-2])
    Print (S)
for i in range (len (S)):
        Sum = S[i]
Mean = (Sum / len (S))
Mean
```

Output :

[0, 1, 1, 2, 3, 5, 8, 13, 21, 34]

8.8

3) Mean and Median for first 5 Prime numbers

$$\text{Mean} = \frac{2+3+5+7+11}{5}$$

$$= \frac{28}{5} = 5.6$$

Median = Middlest value $= \frac{n+1}{2} = \frac{5+1}{2} =$

Median = 5

4) Mean = 66

$$u = \frac{8+11+6+14+x+13}{6} = 66$$

$$\Rightarrow \frac{52+x}{6} = 66$$

$$\Rightarrow \frac{52+x}{6} = 66$$

$$\Rightarrow 52+x = 66 \times 6$$

$$x = (66 \times 6) - 52$$

$$x = 344$$

5) Mean = 9

$$u = \frac{6+8+(x+2)+10+(2x-1)+2}{6} = 9$$

$$\Rightarrow 27 + 3x = 9 \times 6$$

$$\Rightarrow 3x = 54 - 27$$

$$x = \frac{27}{3} = 9$$

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6) (a) age of 20 boys in a locality - Find mean

Age	Number of boys
12	5
10	3
15	2
14	6
8	4

$$\text{Mean} = \frac{(12\times5)+(10\times3)+(15\times2)+(14\times6)+(8\times4)}{20}$$

$$\Rightarrow \frac{60+30+30+84+32}{20}$$

$$\Rightarrow \frac{236}{20} = 11.8$$

~~Ans~~: 11.8 y. Average age of boys ~~available~~ in the locality

(b) 4 Marks obtained by 40 students

Marks	No of students
25	8
30	12
15	10
20	6
24	4

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Mean : $\frac{(25\times8)+(30\times12)+(15\times20)+(20\times6)+(24\times4)}{40}$

$\Rightarrow \frac{200+360+150+120+96}{40}$

$\Rightarrow \frac{926}{40} = 23.15$

7) (a) 12, 8, 4, 8, 9, 11, 9, 10, 12, 8

Mode: Most frequent occuring digit in a series

As Per above Mode = 8

(b) 15, 22, 17, 19, 22, 17, 29, 24, 17, 15

Mode = 17

(C) 0, 3, 1, 3, 5, 4, 3, 42, 1, 2, 0

Mode = 3

d) 1, 7, 2, 4, 5, 9, 8, 3

We can see that there is no number repeated in the given series. Hence Mode is null (0).

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8) Median = 25

17, x+4, x+7, 35, 36, 46

n = 6 x = ?

$$\text{Median} = \frac{\left(\frac{n}{2}\right)^{th} \text{observation} + \left(\frac{n+1}{2}\right)^{th} \text{observation}}{2}$$

$$\Rightarrow 25 = \left(\frac{6}{2}^{th} + \frac{6+1}{2}^{th}\right) \div 2$$

$$\Rightarrow 25 = \left(\frac{3}{2} + \frac{4}{2}\right) \div 2$$

$$\Rightarrow 25 \times 2 = 3+4^{th} \text{ observation}$$

$$\Rightarrow 50 = (x+7) + 35 \Rightarrow 50 - 42 = x$$

$$\Rightarrow x = 50 - 42$$

$$\Rightarrow x = 8$$

9) There is a Possibility of getting various Comb for 3rd & 4th observation, which give various Med Median if the numbers are not in ascending or

10)

(a) No

(b) I will not use Mean for this option, hence R is No

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(c) No

d) I will use Mode in this case because we have to identify most common color. Hence Option D is yes.

The End