ID: 19-41241-2

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Serial: 20

Subject: Computational Statistics

Assignment: 2

23, 22, 21, 22, 21, 20, 21, 21, 22, 22, 22, 22

22, 21, 22, 22

$$A.M = \frac{324}{15}$$

$$= 21.6$$

$$G.M = (324)^{\frac{1}{15}} \quad (304)^{\frac{1}{15}}$$

$$= 21.6 \qquad 20.26$$

$$H.M = \frac{15}{\left(\frac{1}{324}\right)\left(\frac{1}{23}+\frac{1}{22}+\frac{1}{21}+\frac{1}{22}+\frac{1}{21}+\frac{1}{20}+\frac{1}{21}+\frac{1}{21}+\frac{1}{22}+\frac{1}{22}+\frac{1}{21}+\frac{1}{22}+\frac{1}{22}+\frac{1}{22}+\frac{1}{21}+\frac{1}{22}+\frac{1}{22}\right)}$$

$$= 14.11$$

Mode is 22

Median is 22

zubair chowdhury

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Roll	x	$\bar{x}$	$x_i - \bar{x}$	$\lvert x - \bar{x} \rvert$	$(x - \bar{x})^2$
1	23	324/15 = 21.6	23 - 21.6 = 1.4	1.4	1.96
2	22	21.6	0.4	0.4	0.16
3	21	21.6	-0.6	0.6	0.36
4	22	21.6	0.4	0.4	0.16
5	21	21.6	-0.6	0.6	0.36
6	20	21.6	0.4	0.4	2.56
7	21	21.6	-0.6	0.6	0.36
8	21	21.6	-0.6	0.6	0.36
9	22	21.6	0.4	0.4	0.16
10	22	21.6	0.4	0.4	0.16
11	22	21.6	0.4	0.4	0.16
12	22	21.6	0.4	0.4	0.16
13	21	21.6	-0.6	0.6	0.36
14	22	21.6	0.4	0.4	0.16
15	2	21.6	0.4	0.4	0.16
Total (n) = 324					

$$MD = \frac{1}{n}\sum_{i=1}^{n} |x_i - \bar{x}| = \frac{9.2}{15} = 0.6133$$

$$\sigma^2 = \frac{1}{n}\sum_{i=1}^{n} (x_i - \bar{x})^2 = \frac{7.6}{15} = 0.5067$$

$$SD = \sigma = \sqrt{\text{Variance}} = \sqrt{0.5067} = 0.7118$$

$$CV = \frac{0.7118}{21.6} \times 100\% = 3.2954$$