

Q:2: Interquartile range of the dataset :-

→ Here 25 is the outlier

a) Median = 7
 1^{st} quartile = 5
 2^{nd} quartile = 12

$$\text{IQR} = \text{2}^{\text{nd}} \text{ quartile} - \text{1}^{\text{st}} \text{ quartile}$$

$$= (12 - 5)$$

$$= 7$$

IQR tells us the range of the middle half of the data.

b) Positively skewed.

c) In this case there would have been no outliers, and it might have affected the values of mean and median slightly. The boxplot might have moved towards right slightly.

Q:3: a) Mode $b/10$ $5-8$

- b) It is positively skewed.
- c) By comparing both of them it is very clear that the data would be positively skewed. Also would help us finding mean, mode value.

Q:4: Probability of call getting misdirected

$$= \left(\frac{1}{200}\right)$$

So probability of call not getting misdirected

$$= 1 - \left(\frac{1}{200}\right)$$

$$= \frac{199}{200}$$

Number of phone calls attempted = 5

∴ Probability that at least one in 5 attempted call reaches the wrong no is

$$= 1 - \left(\frac{199}{200}\right)^5$$

$$= 0.025$$

Q: 5: a) Highest probability is for 2000.

b) Yes, because the total ~~costing~~ earnings of the venture is positive in value i.e. 800 and highest probability of earning is 2000.

x	p(x)	$x * p(x)$
-2000	0.1	-200
-1000	0.1	-100
0	0.2	0
1000	0.2	200
2000	0.3	600
3000	0.1	300
Total	800	800.

x	p(x)	$x * p(x)$
-2000	0.1	-2
-1000	0.1	-1
0	0.2	0
1000	0.2	2
2000	0.3	6
3000	0.1	3

$$\text{Var} = 86666$$

$$\text{std.} = 294.3$$