1)

|  |  |
| --- | --- |
| Activity | Data Type |
| Number of beatings from Wife | Discrete |
| Results of rolling a dice | Discrete |
| Weight of a person | Continuous |
| Weight of Gold | Continuous |
| Distance between two places | Discrete |
| Length of a leaf | Discrete |
| Dog's weight | Discrete |
| Blue Color | Discrete |
| Number of kids | Continuous |
| Number of tickets in Indian railways | Continuous |
| Number of times married | Discrete |
| Gender (Male or Female) | Discrete |

2)

|  |  |
| --- | --- |
| Data | Data Type |
| Gender | Nominal |
| High School Class Ranking | Interval |
| Celsius Temperature | Interval |
| Weight | Nominal |
| Hair Color | Nominal |
| Socioeconomic Status | Nominal |
| Fahrenheit Temperature | Interval |
| Height | Nominal |
| Type of living accommodation | Ordinal |
| Level of Agreement | Ordinal |
| IQ(Intelligence Scale) | Interval |
| Sales Figures | Ordinal |
| Blood Group | Nominal |
| Time Of Day | Ratio |
| Time on a Clock with Hands | Interval |
| Number of Children | Ratio |
| Religious Preference | Ordinal |
| Barometer Pressure | Ratio |
| SAT Scores | Ratio |
| Years of Education | Ratio |

3) Probability = 3/8

4) a. 0

b. 1/6

c. 1/6

5) 1/3

6) 0.515

7) POINTS :-

Mean: 3.596563

Median: 3.695

Mode: “3.07” ,”3.92”

Variance: 0.2858814

Standard Deviation : 0.5346787

Range: 2.17

SCORE :-

Mean: 3.21725

Median: 3.325

Mode: “3.44”

Variance: 0.957379

Standard Deviation : 0.9784574

Range: 3.911

WEIGHT :-

Mean: 17.84875

Median: 17.71

Mode: “17.02” ,”18.9”

Variance: 3.193166

Standard Deviation : 1.786943

Range: 8.4

8 Ans) Since the given data is finite set of data , the expected value be near to mean

Expected value =145.3333

9 Ans )

Distance: skewness=0.7824,kurtosis = 3.248,Inference:It is right skewed.

Speed: skewness=-0.1139 ,kurtosis = 2.4228,Inference:It is left skewed.

SP: skewness= -0.4076 ,kurtosis =2.086729 ,Inference:It is left skewed.

WT: skewness= -1.287287 ,kurtosis = 3.818701,Inference:It is left skewed.

10 Ans) HISTOGRAM:

i)It is not symmetrical.

ii)It is right skewed .

iii)Typically, mean is greater than median.

BOX PLOT:

i)It is not symmetrical.

ii)It is left skewed.

iii)The mean of the data is less than median .

11 Ans) at 94% confidence level: 199.9675 – 200.0325

at 96% confidence level: 199.9645 – 200.0355

at 97% confidence level: 199.9597 – 200.0403

12 Ans) 1.Mean: 41

Median:40.5

Variance:25.52941

Standard Deviation:5.05266

2. We observe the difference between mean and median is very small.

Slightly mean is greater than median ,this shows that it is slightly RIGHT skewed.

13 Ans) When the values of mean,median and mode are equal then skewness doesn’t exist.

14 ans)When mean > median , then it is right skewed.

15 Ans)When mean<median ,then it is left skewed.

16 Ans) A distribution with a positive kurtosis value indicates that the distribution has heavier tails and a sharper peak than the normal distribution.

For example, data that follow a t distribution have a positive kurtosis value.

17 Ans) A distribution with a negative kurtosis value indicates that the distribution has lighter tails and a flatter peak than the normal distribution

18 Ans) The data is not evenly distributed, it is more distributed towards the left hand side.

It is left skewed as median is far away from the lower quartile

IQR -Inter Quartile Region –(18 -10 = 8)

19 Ans) i) Box plots 1 and 2 have same medians.

ii) Box plot 1 have high level of agreement with Box plot 2 i.e it could have been a part of Box plot 2.

iii)There are high chances that they represent same data with different ranges.

20 ans)

P(MPG>38)

ANS:0.3475941

P(MPG<40)

ANS:0.7293497

                  P (20<MPG<50)

ANS:0.8988689

21 Ans)

a)They don’t follow normal distribution.

b)They follow Normal Distribution.

{The P value of the AT is less than 0.005 which is less than Significance level

and the null hypothesis is accepted.}

The Waist Circumference do follow the normal distribution

22 Ans)60%-0.842

90%-1.645

94%-1.88

23 Ans) 95%-2.064

96%-2.172

99%-2.797

24 Ans) probability = 0.528