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

Q1) Identify the Data type for the Following:

Q2) Identify the Data types, which were among the following

Nominal, Ordinal, Interval, Ratio.

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

Q3) Three Coins are tossed, find the probability that two heads and one tail are obtained?

Ans:

P (Two heads and one tail) = N (Event (Two heads and one tail)) / N (Event (Three

coins tossed))

= 3/8 = 0.375 = 37.5%

Q4) Two Dice are rolled, find the probability where sum is

1. Equal to 1
2. Less than or equal to 4
3. Divisible by 2 and 3

Ans:

Number of possible outcomes for the above event is

N (Event (Two dice rolled)) = 6^2 = 36

1. P (sum is Equal to 1) = ‘0’ zero null nada none.
2. P (Sum is less than or equal to 4) = N (Event (Sum is less than or equal to

4)) / N (Event (Two dice rolled))

= 6 / 36 = 1/6 = 0.166 = 16.66%

1. P (Sum is divisible by 2 and 3) = N (Event (Sum is divisible by 2 and 3)) / N

(Event (Two dice rolled))

= 6 / 36 = 1/6 = 0.16 = 16.66%

Q5) A bag contains 2 red, 3 green and 2 blue balls. Two balls are drawn at random. What is the probability that none of the balls drawn is blue?

Ans: Total number of balls =7 balls

N (Event (2 balls are drawn randomly from bag) = 7! / 2! \* 5!

= (7\*6\*5\*4\*3\*2\*1) /

(2\*1) \* (5\*4\*3\*2\*1)

N (Event (2 balls are drawn randomly from bag) = (7\*6)/ (2\*1) = 21

If none of them drawn 2 balls are blue = 7 – 2 = 5

N (Event (None of the balls drawn is blue) = 5! / 2! \* 3! = (5\*4) / (2\*1)

= 10

P (None of the balls drawn is blue) = N (Event (None of the balls drawn is blue) /

N (Event (2 balls are drawn randomly from

bag)

= 10 / 21

Q6) Calculate the Expected number of candies for a randomly selected child

Below are the probabilities of count of candies for children (ignoring the nature of the child-Generalized view)

|  |  |  |
| --- | --- | --- |
| CHILD | Candies count | Probability |
| A | 1 | 0.015 |
| B | 4 | 0.20 |
| C | 3 | 0.65 |
| D | 5 | 0.005 |
| E | 6 | 0.01 |
| F | 2 | 0.120 |

Child A – probability of having 1 candy = 0.015.

Child B – probability of having 4 candies = 0.20

Ans:

0.015+0.8+1.95+0.025+0.06+0.24 = 3.09