Part 1:

Discrete random variables:

1- Number of times I wash my hands per day. Range is

2- Value of a dice roll

3- Number of males in a random sample of 100 students

4- Number of leaves in a tree picked at random

5- Number of words in the first page of a book picked at random

Continuous random variables:

1- Weight of an apple picked at random

2- Distance between two people picked at random

3- Diameter of a leaf picked at random

4- The time I wake up at on every morning

5- The exact amount of a water in a water bottle picked at random

Part 2:

Part 3:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Mean | Median | Mode | Std | Type |
| X1 | 5.005947 | 4.991819 | -13.5101 | 5.214861 | Continuous |
| X2 | 5.021712 | 3.48154 | 0.000713 | 5.065176 | Continuous |
| X3 | -1.6E-17 | -4.9E-16 | 0.999921 | 0.707142 | Continuous |
| X4 | 3.502786 | 3.502741 | 2.001011 | 0.86825 | Continuous |
| X5 | 2.22E-20 | -4.9E-16 | 0.999921 | 0.707142 | Continuous |
| X6 | 5.0311 | 5 | 4 | 2.245359 | Discrete |
| X7 | 14.0079 | 14 | 14 | 2.048672 | Discrete |
| X8 | 0.4949 | 0 | 0 | 1.117541 | Discrete |
| X9 | 26.9999 | 26.87757 | -3.97136 | 14.57826 | Continuous |
| X10 | -0.00946 | -0.03595 | -11.1221 | 4.458542 | Continuous |

X1 is a normal distribution. We can estimate it using the mean (5.006) and standard deviation (5.21) of the sample.

X2 is ???

X8 is a discrete rectangular distribution. We can estimate it using the total number of possible outcomes in the sample (N = 4).