

PRACTICE QUESTIONS FOR MESURES OF POSITION

EXERCISE 2.4

1. The following data give the prices of seven textbooks randomly selected from a university bookstore.

\$89, \$170, \$104, \$113, \$56, \$161, \$147

Find $Q_1, Q_2, Q_3, D_7, P_{57}$ for the data set.

(Ans : $Q_1 =$, $Q_2 =$, $Q_3 =$, $D_7 =$, $P_{57} =$)

2. The following data are the yields (in pounds) of hops

3.9, 3.4, 5.1, 2.7, 4.4, 7.0, 5.6, 2.6, 4.8, 5.6, 7.0, 4.8, 5.0, 6.8, 4.8, 3.7, 5.8, 3.6, 4.0, 5.6

(a) Find the quartiles Q_1, Q_2 and Q_3 of the yields also interpret the results.

(b) Find the deciles D_2, D_5 and D_9 of the yields also interpret the results.

(c) Find the percentiles P_{15}, P_{33} and P_{90} of the yields also interpret the results.

(Ans : $Q_1 = 3.8, Q_3 = 5.6, D_2 =$, $D_5 =$, $D_9 =$, $P_{15} = 3.5, P_{33} = 4, P_{90} = 6.9$)

3. CGPA of ten students of BS Data Science are as follows

1.2, 2.6, 2.8, 2.9, 3.0, 3.1, 3.3, 3.4, 3.5, 3.9

Find percentile rank for the student having CGPA 3.4.

(Ans : *Percentile Rank* = 70)

4. Final Marks of 11 students in Business Statistics are as follows

9, 51, 58, 61, 65, 67, 72, 73, 75, 78, 85

(a) Find Quartiles for the data.

(b) Identify Outliers in the data if any.

(c) Construct Box and whisker Plot for the given data.

(Ans : $Q_1 = 58, Q_2 = 67, Q_3 = 75, \text{Outlier} = 9$)

5. The marks of the pupils in a History examination are as follows

28 33 55 38 42 39 27 48 51 37 57 49 33

The marks of the pupils in a Physics examination are as follows

Lower Quartile = 28, *Median* = 39, *Upper Quartile* = 67

The Lowest mark was 17 and the highest mark was 74

Draw box-and-whisker plots in a single diagram on graph paper to illustrate the marks for History and Physics.