Quiz 1 Statistics for Data Science, 3rd Semester Course, RVCE Bangalore Marks 10

1. Consider the following data: (X, Y): (1, 5), (2, 5), (3, 5).
   (a) X and Y relation is not known
   (b) X and Y are independent
   (c) X and Y are **not** independent
   (d) X and Y are linearly correlated

2. Box plot is a
   (a) Five data summary
   (b) Four data summary
   (c) Three data summary
   (d) Visualization showing the distribution of data

3. A list has 6 numbers. Five of the deviations from the average are 1, 2, 3, 4, 5. The sixth deviation from the average is
   (a) 15
   (b) -15
   (c) 0
   (d) -3

4. In the first test of Statistics for Data Science course for 3rd semester students, Prof A finds that the class average is, shockingly, 48 on 50. Suspecting mass copying, he subtracts 10 marks from each of the students. The average of the new scores is
   (a) The same as the old average
   (b) New Average = Old Average +10
   (c) New Average = Old Average -5
   (d) New Average = Old Average -10

5. The sum of deviations from the average is always
   (a) > 0
   (b) < 0
   (c) = 0
   (d) Dependent on the data

6. Which of the following about variance is **FALSE**?
   (a) Variance is always greater than or equal to 0
   (b) Variance can be negative

(c) Variance is measured in square units of the data
(d) Variance is zero only if all the data values are the same.

7. Identify the data set with very least variance
(a) The age of students in Kendriya Vidyalaya cross the country
(b) The age of people who visit Phoenix Market City Mall
(c) The age of undergraduate students studying in RVCE
(d) The age of professors working in RVCE

8. A boxplot is given below.

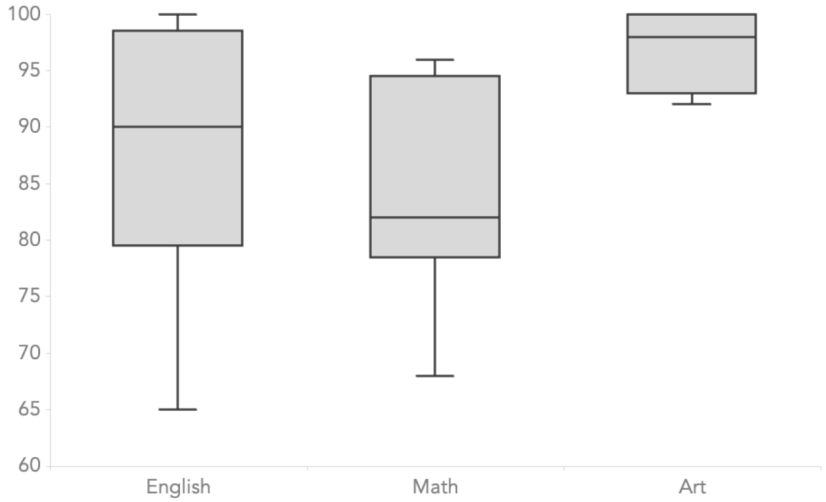

Figure: Question Number 8.

Which of the following cannot be inferred from the boxplot above.
(a) The median scores in each subject
(b) The score range in each subject
(c) The number of students scoring highest marks in each subject
(d) The distribution of marks in each subject

9. Which of the following quantities is the **LEAST** affected by outliers?
(a) Mean
(b) Variance
(c) Mean absolute deviation
(d) Median

10. Two events A and B are independent if and only if
(a) $P(A \cap B) = P(A)P(B)$
(b) $P(A \cap B) < P(A)P(B)$
(c) $P(A \cap B) > P(A)P(B)$
(d) $P(A \cap B) = 1$