



Inspiring Excellence

Name:

ID:

STA201: Elements of Statistics and Probability

Quiz 01

Section: 20

Date: 25/10/2022

1. Here we have the data of oxygen consumption (mL/kg/min) for a sample of 10 firefighters as follows:

26	31	33	23+Y	48	32	29	28	30	25
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Here, Y is the last digit of your student ID (i.e., 22101032, 21213515, etc.). Suppose your ID is 22101032, then Y will be 2.

- a) Determine the mean oxygen consumption.

- b) What is the median oxygen consumption?

- c) Find the second and third quartiles and comment.

2. A group of travelers are going on a long drive from Dhaka to Srimangal. They divided their route into 3 equal parts, and planned on maintaining an average speed of 100 km/h on their way to their destination. Their speed for the first and second part were 120 km/h and 90 km/h respectively.

- a. What was their speed for the third part if they successfully maintained their target average speed?

- b. On their return journey, they maintained a speed of 130km/h. What was their average speed for the entire trip from Dhaka to Srimangal?

3. The following table is the distribution of students' favorite color according to the 3 departments of a university.

Favorite Color	MNS	CSE	EEE	Total
Blue	13	19	9	41
Yellow	X	15	13	39
Red	$\sqrt{144}$	21	8	41
Pink	16	15	Y	40
Total	52	70	39	161

a. Determine the value of X and Y.

b. What proportion of students whose favorite color is red are from EEE?

c. Among the CSE students, what is the proportion of students whose favorite color is not yellow?