### NPTEL » Practitioners Course In Descriptive, Predictive And Prescriptive Analytics

Announcements

Ask a Question

Progress

Mentor

## Unit 5 - Week 3

Course outline					
How to access the portal					
Week 0					
Week 1					
Week 2					
Week 3					
<ul> <li>Lecture 8: Statistics and Analytics</li> </ul>					
Lecture 9: Descriptive     Statistics – Graphical Tools					
Lecture 10: Frequency     Distribution & Histogram					
O Lecture 11: Stem and Leaf Plot					
O Quiz: Assignment - 3					
O Solutions - Assignment 3					
O Feedback form for week 3					
Week 4					
Week 5					
Week 6					
Week 7					
Week 8					

# Assignment - 3

The due date for submitting this assignment has passed. As per our records you have not submitted this assignment. Due on 2019-09-18, 23:59 IST.

1) In a large dataset, usually, the technique of grouping the data to reduce the size will not lose any information. Is this statement True or False?

1 point

2 points

True

False

No, the answer is incorrect.

Score: 0 Accepted Answers:

False

2) An automobile company had issued a new car model last year and offered to provide free service to the customer for the first two years.

The manager of one of the authorized service center decided to study the most defective parts of the car's engine and thus designed an experiment to perform pareto analysis.

The service centre has started recording all the engine related repairs after the completion of one year of the launch of the vehicle, for the next five months. The average defects in each distinct category for the data collection of five months will be used for the pareto analysis.

The data collected for the 5 months is shown in the table below.

Table 1

Defect Reports	Month 1	Month 2	Month 3	Month 4	Month 5
Failure in Flywheels	4	7	2	1	6
Bending in Crankshaft	5	2	4	0	5
Wear in piston rings	9	7	27	19	14
Irregular fuel spray by injector	54	56	88	42	71
Malfunctioning of spark plug	25	5	9	9	2
Bearing defect	4	12	2	14	7
Connecting rod replacement	2	1	4	2	2
Irregular profile of camshaft	9	17	14	11	12
Manifold Blockage	96	125	84	97	119
Damage in crank case	2	5	7	1	0

Which of the following are the top defects that are causing 80% of the complaints?

Choose the most appropriate option from below.

- Malfunctioning of spark plug, Connecting rod replacement & Manifold Blockage
- Manifold Blockage, Irregular fuel spray by injector & Wear in piston rings Malfunctioning of spark plug, Irregular fuel spray by injector & Damage in crank case
- Bearing defect, Damage in crank case & Bending in Crankshaft

#### No, the answer is incorrect. Score: 0

#### Accepted Answers:

Manifold Blockage, Irregular fuel spray by injector & Wear in piston rings

As per the data given in Table 1, what is the percentage of the defects caused by "Bearing Defects" using the Pareto analysis. Choose the most appropriate option from below.

2 points

- 9.72 12.86
- 3.48
- 21.46

#### No, the answer is incorrect. Score: 0 Accepted Answers:

3.48

Is this statement true or false?

Creating a stem and leaf plot can help in the preliminary analysis of the dataset without losing out any information.

1 point

False

True

#### No, the answer is incorrect. Score: 0

Accepted Answers: True

A study was conducted to analyze the girth of a particular medicinal tree in different parts of the country. The data is available in the Table 2 given below.

2 points

2 points

Table 2

Girth of trees (in cm)						
148	102	101	135			
129	123	143	143			
116	120	123	150			
92	102	146	126			
135	147	143	133			
97	146	116	95			
90	137	126	120			
124	113	160	150			
156	109	114	126			
110	139	133	129			
ng the study.The boundaries						

were decided as 90 and 160. Seven different classes were created from the collected data during

What is the range of the girth as per the data? Choose the most appropriate option.

- 90
- 152 60

O 70

#### No, the answer is incorrect. Score: 0

Accepted Answers:

6) As per the data given in the Table 2 for the study on the girth of the tree, choose the correct classes from the options given below. C1:90-100 C2:100-110 C3:110-120 C4:120-130 C5:130-140 C6:140-150 C7:150-160

C1:80-100 C2:100-120 C3:120-140 C4:140-160 C5:160-180 C6:180-200 C7:200-210 C1:92-102 C2:102-112 C3:112-122 C4:122-132 C5:132-142 C6:142-152 C7:152-162

None of these No, the answer is incorrect.

Accepted Answers:

Score: 0

C1:90-100 C2:100-110 C3:110-120 C4:120-130 C5:130-140 C6:140-150 C7:150-160