Topic 9:
DATA COLLECTION AND PRESENTATION

Key words: data, chart, pie, quantitative, qualitative, discrete, continuous, hypothesis

By the end of this topic, you should be able to:

a) understand the differences between types of data.
b) collect and represent simple data from local environment using bar chart, pie chart and line graph.

Introduction

In this topic, you will learn different types of data, data collection, presentation and analysis.

Sub-topic 9.1: Types of Data

Qualitative data is data that is not given numerically; e.g. favourite colour, place of birth, favourite food, and type of car.

Quantitative data is numerical. There are two types of quantitative data: discrete and continuous data. Discrete data can only take specific numeric values e. g. shoe size, number of brothers, number of cars in a car park. Continuous data can take any numerical value e.g. height, mass, length.

Activity 9.1: Identifying types of data

In your groups identify which of the following terms best describes each of the information listed (i) to (vii)?

Give reasons for your response.

- Qualitative data
- Continuous Quantitative Data
- Discrete Quantitative Data

i) Age
ii) Birth place
iii) Height
iv) World Ranking
v) Aces
vi) First serve School
vii) School life

In your groups identify more examples.

Exercise

1. Mr Okot starts to make a database for his lesson.

Name	Age	Primary school	Transport to School	Height	Reading Glasses
Alice	11	St. Johns	Bus	145cm	yes
Ben	12	St. Andrews	Walk	160 cm	no
Carol	12	Hilltop	Car	161 cm	no
David	12	Hilltop		152 cm	no
Eddie	11	St. Andrews	Walk	158 cm	yes
Fredrick		St. Andrews	Bike	164 cm	no
Graham	12	St. Johns	Bus	166 cm	yes

a) What is missing from Mr Okot's database?
b) Which columns in the database contain quantitative data?
c) Which columns in the database contain qualitative data?
d) Write down what Mr Okot would put in his database if you joined his class.

2. Which of the following would give:

(a) qualitative data

(b) discrète quantitative data

(c) continuous quantitative data

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(i) Mass   (ii) Number of cars

(iii) Favourite football team   (iv) Colour of car

(v) Price of chocolate bars   (vi) Amount of pocket money

(vii) Distance from home to school   (viii) Number of pets

(ix) Number of sweets in a jar   (x) Mass of crisps in a packet.

3. The table below shows a database that has no entries.

Name	Age	Favourite food	Favourite TV show	Favourite pop group	Time spent watching TV yesterday

a)   Collect data from 10 people to complete the data base.
b)   State whether each column contains:
    i)   qualitative data.
    ii)   continuous quantitative data.
    iii) or discrete quantitative data.
c)   Answer the following questions:
    i)   What is the most popular TV show?
    ii)   Who is the oldest?
    iii) What is the favourite pop group for the youngest person?
d)   Write 3 more questions you could answer using your database and write the answers to them.