

SHARP

Worksheet 18: Collect, Organise and Summarise Data

Grade 8 Mathematics

Collecting Data:

- 1) Create a mind map showing the different ways you can collect data.
- 2) State whether the following data is discrete or continuous:
 - a) The number of tries scored by the different teams in the rugby world cup.
 - b) The times taken by different athletes to complete the Two Oceans Marathon.
 - c) The number of cars parked in a parking lot at a shopping centre.
 - d) The individual heights of all the students in your class.
- 3) Provide an example explaining the difference between a population and a sample in the context of your school.

Organising Data:

Students at your school were asked to rate the service they experienced from the school tuck-shop:

Extremely poor (1)	Poor (2)	Average (3)	Good (4)	Excellent (5)
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Rating				
5	3	4	5	3
4	4	2	3	1
2	4	3	2	1
1	3	2	4	5

- 4) Represent the following data as a tally and frequency table:

Call of Duty was one of the most popular online games played last year. Data was collected displaying the ages of these gamers and was organized into male and female in the table below:

Male				Female			
16	18	27	42	17	16	36	30
22	20	23	21	45	23	42	20
15	36	38	38	19	19	38	19
63	44	46	28	29	33	40	25

- 5) Represent the following data as a back- to-back stem and leaf display.
- 6) Represent the data of the females into class intervals. The first one has been done for you.

Class intervals	Frequency
16 - 20	6
21 - 25	?

Summary of Data:

- 7) Organise the following words under the correct headings:

Extremes	Mean	Median	Range	Mode

- a) Measure of central tendency
 - b) Measures of dispersion
- 8) Use the data based on the online game (Call of Duty) found above question 6, and answer the following questions:
 - a) What was the average age for the males?
 - b) What is the range of females who played the online game?
 - c) Write down any outliers or extremes with regards to the males ages.
 - d) Write down the mode for the females who played the online game.
 - e) Determine the median for the male online gamers.

- 9) The annual earnings of 60 celebrities (in dollars) are represented as grouped data in the following table:

Class intervals (in millions of dollars)	Frequency (number of celebrities)
$5 \leq x < 10$	16
$10 \leq x < 15$	12
$15 \leq x < 20$	6
$20 \leq x < 25$	4
$25 \leq x < 30$	8
$30 \leq x < 35$	5
$35 \leq x < 40$	2
$40 \leq x < 45$	7

- Calculate the estimated mean for the data.
- Determine the median class.
- Write down the modal class.