

SHARP

Worksheet 20 Memorandum: Interpret, Analyse and Report Data

Grade 8 Mathematics

Learners in a class were asked how many hours in a week they spend on social media. The following graph was developed from the data.

- 1) This is a Histogram graph.
- 2) $1 + 2 + 4 + 2 + 4 + 11 + 5 + 2 = 31$ learners
- 3) 22 learners
- 4) 20 -23 hours is the modal class. This means that most of the class spend this amount of time on social media.
- 5) The estimated mean:

Class intervals	Frequency (learners)	Midpoint of class interval	Frequency \times Midpoint
0-3	1	1,5	1,5
4-7	2	5,5	11
8-11	4	9,5	38
12-15	2	13,5	27
16-19	4	17,5	70
20-23	11	21,5	236,6
24-27	5	25,5	127,5
28-31	2	29,5	59
Total	31		570,5

$$\text{Estimated mean} = \frac{570,5}{31} = 18,4$$

6) Learners who spend many hours on social media will have less time to focus on their academics such as homework and studying which can directly impact their results.

$$7) 2\frac{15}{60} \times 7 = 15\frac{3}{4}$$

$$\frac{3}{4} \times 60 = 45 \text{ minutes. Total hours} = 15 \text{ hours and } 45 \text{ minutes.}$$

8) This is a pie chart.

9) Percentage of grade 8 learners that participate in various Sports and cultural activities.

10) Sports and Culture in descending order:

- Athletics
- Soccer
- Rugby
- Public Speaking
- Chess
- Drama
- Swimming
- Music

11) Swimming and Music as they have the lowest attendance.

$$12) \frac{18}{100} \times 140 = 25,2 \approx 25 \text{ students}$$

13) A double bar graph would be recommended for this data.

14) 42 000 energy drinks

$$15) 42\,000 - 38\,000 = 4000$$

16) The sales of energy drinks sold from May – August look like a huge increase from the beginning of the year but it was only an increase of 2000 units. The vertical scale is not consistent which exaggerates the data to make the sales throughout the year look a lot higher than they are.

17) Redraw the graph showing a more accurate representation of the data.

