Data handling and graphs

Free Extra Maths Class · Grade 7

Name: _____

Remember: **Mean** = total ÷ number of values. **Median** = middle after sorting. **Mode** = most common. **Range** = biggest − smallest. Circle: 360° = 100%.

Why? The mean shares the total out fairly, as if everyone gets the same. The range shows how spread out the data is.

1. The temperature (°C) on 7 days: 18; 22; 19; 25; 21; 17; 23. What is the **range**?

2. A netball team's goals in 9 matches: 12; 15; 12; 18; 14; 12; 15; 16; 13. What is the **mode**?

3. Seven learners' marks in a spelling test: 14; 9; 17; 11; 20; 13; 16. What is the **median**?

4. The rainfall (mm) on 5 days: 6; 11; 4; 9; 10. Calculate the **mean** rainfall.

5. The tally marks show each learner's favourite fruit. How many learners were asked altogether?

Apple	𝍸 ||
Banana	𝍸 𝍸 ||
Orange	𝍸 ||||
Mango	𝍸

6. The stem-and-leaf display shows 13 learners' scores in a quiz (out of 50). What is the **median**?

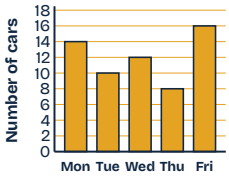
Stem	Leaves
1	8
2	3 5 5 9
3	1 4 4 4 8
4	0 2 7

2 | 3 means 23

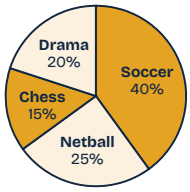
7. The pets of 12 families: 1; 0; 2; 1; 3; 1; 0; 2; 4; 1; 2; 1. How many families have **2 or more** pets?

8. Use the stem-and-leaf display in question 6. What is the **range** of the scores?

9. The bar graph shows the cars washed each day. How many more were washed on Friday than on Thursday?



10. The pie chart shows which club 240 learners chose. How many learners chose soccer?



11. Use the bar graph in question 9. Calculate the **mean** number of cars per day.

12. Use the pie chart in question 10. How big is the angle at the centre for chess?

13. The **mean** of 5 scores is 14. Four of them are 12; 15; 11; 17. What is the fifth score?

14. 6 friends have a mean of 24 cans each. Lerato brings 38 cans. What is the new mean for all 7?

15. 36 learners get to school like this: walk 15; bus 9; taxi 8; bicycle 4. Calculate the angle at the centre for each sector of a pie chart.

I got _____ **out of 15** ☆ ☆ ☆

Memorandum

Data handling and graphs

Other correct methods are also right.

1. **8 °C**
   25 – 17 = 8

2. **12**
   12 comes up 3 times – the most.

3. **14**
   Sort: 9; 11; 13; 14; 16; 17; 20; the middle (4th) number is 14.

4. **8 mm**
   6 + 11 + 4 + 9 + 10 = 40; 40 ÷ 5 = 8

5. **33**
   7 + 12 + 9 + 5 = 33

6. **34**
   The numbers are already sorted. The middle one of 13 is the 7th number: 34

7. **5**
   Frequency – 0: 2, 1: 5, 2: 3, 3: 1, 4: 1; 3 + 1 + 1 = 5

8. **29**
   Biggest 47, smallest 18: 47 – 18 = 29

9. **8**
   Friday 16, Thursday 8: 16 – 8 = 8

10. **96**
    40% of 240 = 40 ÷ 100 × 240 = 96

11. **12**
    14 + 10 + 12 + 8 + 16 = 60; 60 ÷ 5 = 12

12. **54°**
    The whole circle is 360° = 100%. 15% of 360° = 15 ÷ 100 × 360 = 54°

13. **15**
    Total = 14 × 5 = 70; 12 + 15 + 11 + 17 = 55; 70 – 55 = 15

14. **26 cans**
    6 × 24 = 144; 144 + 38 = 182; 182 ÷ 7 = 26

15. **walk 150°; bus 90°; taxi 80°; bicycle 40°**
    Each learner gets 360° ÷ 36 = 10°. 15 × 10 = 150; 9 × 10 = 90; 8 × 10 = 80; 4 × 10 = 40. Check: 150 + 90 + 80 + 40 = 360 ✓