








GRADE 12 Data Handling. Memo

This is the results of the recent elections.

Party	Votes	Percentage	Seats
 ANC	6,448,285	40.21%	
 DA	3,494,136	21.79%	
 MKP	2,338,484	14.58%	
 EFF	1,525,662	9.51%	
 IFP	617,811	3.85%	
 PA	329,444	2.05%	
 VF	217,576	1.36%	
 ACTIONS SA	190,889	1.19%	
 ACDP	96,238	0.6%	
 UDM	78,334	0.49%	
 OTHERS	423,635	4.37%	

Study the above results and answer the questions:

1. Combine the percentages of the ANC and the DA.

*Memo:*  $40,21\% + 21,79\% = 62\%$

2. If the ruling party needs 50% of the votes, is it possible that the MKP and EFF and VF form a coalition to rule?

*Memo:*  $14,58\% + 9,51\% + 1,36\% = 25,45\%$  *No it is not possible.*

3. Write the results of the bottom 3 parties down as a common fraction.

*Memo:*  $1,19\% = 1 \frac{19}{100}$

$$0,6 = \frac{6}{10} = \frac{3}{5}$$

$$0,49 = \frac{49}{100}$$

4. How many votes did the ANC need to have 50% majority?

Memo:  $\frac{6\,448\,285}{x} = \frac{40,21}{100}$  Thus  $40,21x = 644\,828\,500$  Thus  $x = 644828500 \div 40,21 = 16036520,77$

$$50\% = \frac{16036520,77}{2} = 8018260,383 \approx 8\,018\,260 \text{ votes}$$

5. Write down the DA votes in words.

Memo: Three million four hundred and ninety four thousand hundred and thirty six.

6. Add the votes of the EFF and MKP together and work out the percentage that they short to have a majority vote of 50%

Memo:  $1\,525\,662 + 2\,338\,484 = 3\,864\,146$  votes.

$8\,081\,260 - 3\,864\,146 = 4\,217\,114$  votes

7. Give the ratio of the ANC to DA.

Memo:  $6\,448\,285 : 3\,494\,136 \approx 2 : 1$

8. Calculate the median percentage.

Memo:  $\frac{3,85+2,05}{2} = 2,95\%$

9. Name the type of data and give a reason for your answer.

Memo: Discrete data, because they count the votes.

10. Name the type of graph/s that you would use to represent this data.

Memo: Bar Graph or a pie chart

11. If one draws a pie chart of the above results, what would the degrees for the ANC be?

Memo:  $\frac{40,21}{100} \times 360 = 144,76^\circ$

12. Calculate  $Q_1$  if you include the votes of the other parties as one party.

Memo: 1,19

**0,49 ; 0,6 ; 1,19 ; 1,36 ; 2,05 ; 3,85 ; 4,37 ; 9,51 ; 14,58 ; 21,79 ; 40,21**

13. Calculate  $Q_2$  if you include the votes of the other parties as one party.

Memo: 3,85

14. Calculate  $Q_3$  if you include the votes of the other parties as one party.

Memo: 14,58

15. Calculate IQR if you include the votes of the other parties as one party.

Memo:  $14,58 - 1,19 = 13,39$

16. We look at the spread of the data when we consider the box and whisker diagram.  
Explain in your own words what the above IQR mean.

Memo: 50% of the votes lies between 1,19 and 14,58

