

Managing *Magnificent 7* ivory data

The table below shows the length and weight of each of the tusks of Kruger's *Magnificent Seven* elephants. You have been asked to compile some information for an article in the *Sunday Times* about elephants and their ivory. The editor needs a response today and wants to know:

BASIC FACTS

1. Which of the *Magnificent Seven* elephants had the longest single tusk?
2. Which had the heaviest single tusk?
3. What was the average length of all the tusks? Give your answer to the nearest whole number.
(Hint: The average is calculated as the sum of all the figures divided by the total number of the figures you have used)

COMPARISONS

4. In percentage terms, how much longer than average was the longest tusk? Give your answer to the nearest whole number.
(Hint: The percentage difference is the difference divided by the figure you are comparing it to, multiplied by 100)
5. The editor has heard that another Kruger elephant, Mandleve, had a left tusk that was 5% heavier than the heaviest of the *Magnificent Seven's* tusks. How heavy was it? Give your answer to one decimal place.

REPRESENTATIONS

6. Busy readers will not want to read all the numbers in the table so the editor would like an image of the data. Draw a bar chart to show the lengths of each elephant's ivory in comparison with the other tuskers. Make sure you clearly label your axes and give your chart a title.
(Hint: Draw the bars for the left and right tusk for each elephant together).
7. Superimpose the weights as a line graph on top of this bar chart.
(Hint: You can draw a second axis parallel to the length one).

CONTEXT

8. These figures in their own right do not mean very much. Research the lengths and weights of other things you are familiar with in the real world (e.g. cars, houses, people, food etc) and use these as a comparison to provide some context for these figures. Generate statements that

compare the elephant statistics to more familiar objects in a meaningful way (e.g. Shawu's left tusk was longer than a small car).

(Hint: ask your friends and family how much things weigh or measure, use the internet to find out the dimensions of manufactured products. Consider how many bags/boxes of smaller things would be needed to make up these figures).

COMMUNICATION

9. Visit the Letaba Elephant Hall online (<http://www.sanparks.org/parks/kruger/elephants>) and read the material provided about the *Magnificent Seven*. Write your own article for the *Sunday Times* incorporating all the facts you have calculated above.

Think of a grabbing headline and include an illustration of one of the tuskers if you want. Your piece should be no longer than 500 words.

Name	Left length (cm)	Left weight (kg)	Right length (cm)	Right weight (kg)
Dzombo	237	56.8	237	56.8
João	271	70	250	60
Kambaku	259	63.2	265	64
Mafunyane	251	55.1	251	55.1
Ndulalmithi	287	64.6	273	57.2
Shawu	317	52.6	305	50.8
Shingwedzi	264	58.1	207	47.2