

AFRICAN INSTITUTE FOR MATHEMATICAL SCIENCES

SCHOOLS ENRICHMENT CENTRE (AIMSSEC)

AIMING HIGH

SA DEMOGRAPHICS

The table gives the 2013 population statistics for South Africa.

Complete the table and draw a histogram to represent this data. Remember that for a histogram the area in each column represents the frequency for that class.

Work out the mean age of this population.

What can you say about the other measures of central tendency (median and mode)?

Comment on the distribution.

You can see that almost half the population is under 25 years old. What social, economic and political effect do you think this has on South African society? Is the population of your village or town similar to the national population? How could you find out?

| Age | Class width in years | Frequency as percentage of population | Frequency density as % per year | Frequency in thousands (to nearest 1000) |
|----------------|-------------------------|---|------------------------------------|---|
| 0 – 14 years | | 28 | | 13 667 |
| 15 – 24 years | | 21 | | |
| 25 – 54 years | 30 | 38 | 38/30 = 1.27 | 18 548 |
| 55 – 64 years | | 7 | | |
| 65 – 119 years | | 6 | | |
| | | | | 48 810 |

In 2013 the oldest person in the world was Johanna Mazibuko age119 years living near Johannesburg SA

Help

This example may help you to draw the histogram for the SA Demographics data.



This histogram shows the number of children on a school bus. There are no children under 5 years, 6 children aged between 5 and 10 years, and no children over 17 years.

The **area** of the bars in a **histogram** represents the frequency and the **height** is the **frequency density**. So for the children aged 5 - 10 the **frequency density** (the **height** of the bar) is 1 child per year and the **frequency** (the **area** of the bar) is $6 \times 1 = 6$ children in that age group.

See: 'Histogram' <u>https://aiminghigh.aimssec.ac.za/grades-7-to-10-histogram/</u> on the AIMING HIGH Teacher Network website.

|] | Extension | | | | | |
|---|-----------------------|--------------------|------|--|--|--|
| | Population of UK 2011 | | | | | |
| | Age group | Total (million) | % | | | |
| | 0–14 | 11.100 | 17.6 | | | |
| | 15–64 | 41.704 | 66.0 | | | |
| | 65+ | 10.378 | 16.4 | | | |
| | All ages | 63.182 | 100 | | | |

Draw a histogram to compare the population distributions for the United Kingdom and South Africa. What do you think are the social and economic implications of the differences between these two distributions?