7 The pre-release material contains information about health expenditure. **Fig. 7.1** shows an extract from the data.

Country	Health expenditure (% of GDP)
Algeria	7.2
Egypt	5.6
Libya	5
Morocco	5.9
Sudan	8.4
Tunisia	7
Western Sahara	#N/A
Angola	3.3
Benin	4.6
Botswana	5.4
Burkina Faso	5

Fig. 7.1

(a) Explain how the data should be cleaned before any analysis takes place. **[1]**

Kareem uses all the available data to conduct an investigation into health expenditure as a percentage of GDP in different countries.

He calculates the mean to be 6.79 and the standard deviation to be 2.78.

Fig. 7.2 shows the smallest values and the largest values of health expenditure as a percentage of GDP.

Smallest values of Health expenditure (% of GDP)	**Largest values of Health expenditure (% of GDP)**
1.5	11.7
1.9	11.9
2.1	13.7
	13.7
	16.5
	17.1
	17.1

Fig. 7.2

(b) Determine which of these values are outliers. **[4]**

Kareem removes the outliers from the data and finds that there are 187 values left. He decides to collect a sample of size 30.

He uses the following sampling procedure.

Assign each value a number from 1 to 187.

Generate a random number, n, between 1 and 13.

Starting with the nth value, choose every 6th value after that until 30 values have been chosen.

(c) Explain whether Kareem is using simple random sampling. **[2]**