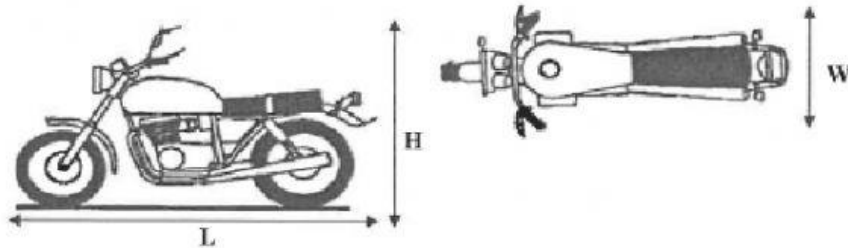


4.2

Four more friends will be joining Peet and Roland. They will travel by car and use a trailer to transport their motorcycles. To protect the motorcycles from damage, they need a 20 cm space around all four sides of the motorcycles.

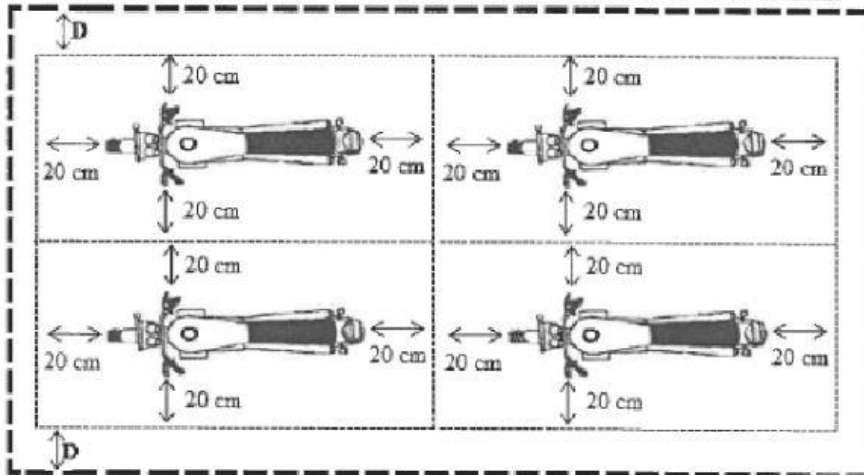
The dimensions of a single motorcycle are given below.



Length (L) = 229 cm, height (H) = 125 cm and width (W) = 86 cm.

Below is the layout plan of the four motorcycles placed onto the trailer.

LAYOUT PLAN OF THE FOUR MOTORCYCLES ON THE TRAILER



KEY: --- Outer dimensions of the trailer with a length of 550 cm and a width of 260 cm.

[Adapted from www.covercraft.com]

Use the sketches above to answer the questions that follow.

- 4.2.1 Calculate the minimum length required to safely place two motorcycles, one behind the other, onto the trailer, taking into account the precautionary measures above.

(3)

- 4.2.2 If the two motorcycles are placed in the centre of the trailer, **D** will be the equal distance on either side of the width of the trailer, as shown in the diagram.

Calculate (in cm) the value of **D**.

(4)
[17]

QUESTION 5

- 5.1 TABLE 5 below shows the results of a recent gymnastics competition held at a school. The table shows the gymnasts' names, teams, divisions and various events with total scores given to three decimal places.

TABLE 5: RESULTS OF A GYMNASTICS COMPETITION

GYMNAST	TEAM	DIV.	EVENTS				TOTAL SCORE
			VAULT	BARS	BEAM	FLOOR	
G Gilliland	GTC	Senior A	9,550	9,100	9,400	9,625	37,675
H Radebe	Olympus	Junior B	9,450	9,250	8,900	9,400	37,000
L Gumede	Olympus	Junior A	9,475	9,300	8,700	9,500	36,975
S Rigby	TGA	Senior A	9,500	8,650	8,925	9,350	36,425
H Khumalo	GTC	Senior A	9,300	9,100	A	9,225	36,425
C Maile	Olympus	Junior A	8,950	9,050	9,025	9,375	36,400
M Stolp	GTC	Senior A	9,400	8,750	8,725	9,500	36,375
M McBride	GTC	Junior A	9,475	9,050	8,700	9,050	36,275
A Boom	TGA	Senior A	9,650	8,300	8,700	9,500	36,150
B Makhatini	Olympus	Junior B	9,350	9,200	9,150	9,350	37,050

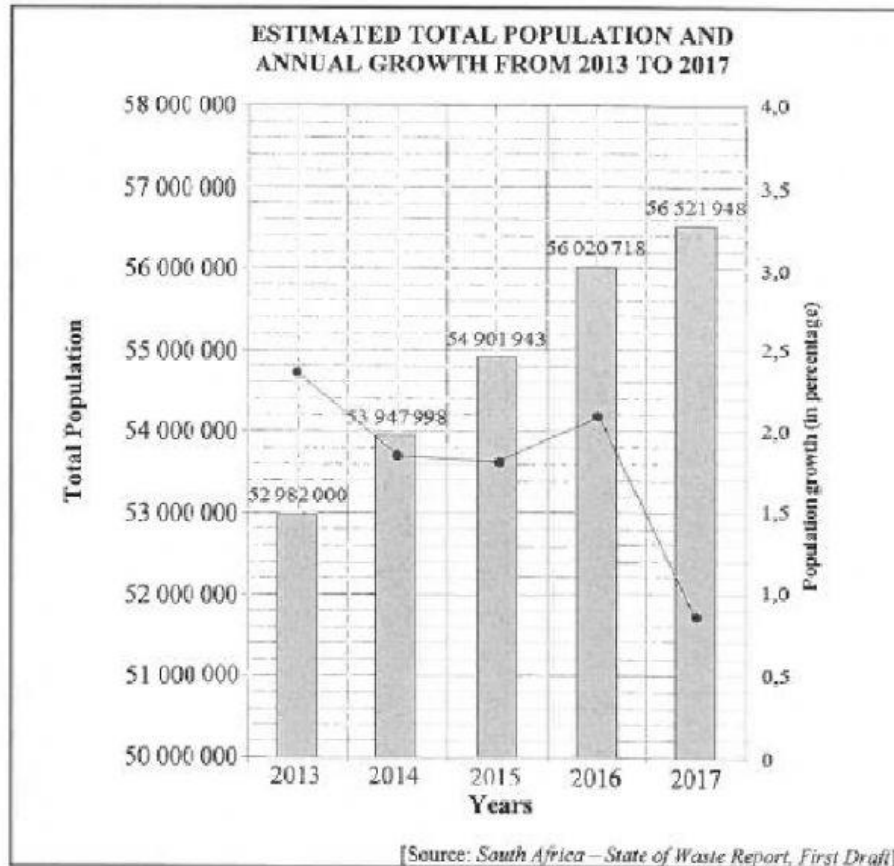
[Adapted from www.meetscoresonline.com]

Use TABLE 5 to answer the questions that follow.

- 5.1.1 Identify the team that achieved the highest score for the vault event. (2)
- 5.1.2 Determine the range of G Gilliland's scores. (2)

- 5.1.3 Calculate the mean score for the bar event. (3)
- 5.1.4 Determine missing value A. (3)
- 5.1.5 Write down the modal score for the total points scored. (2)
- 5.1.6 Determine, as a percentage, the probability of selecting a gymnast in the Junior division with a total score of more than 36,970. (3)
- 5.1.7 Calculate the value of quartile 2 for the floor event. (3)

- 5.2 The graph below shows the estimated total population of South Africa and the annual population growth from 2013 to 2017.



- 5.2.1 Write down in words, and without the use of numbers, the population of South Africa in 2013. (2)
- 5.2.2 Determine, rounded to the nearest 10 000, the population increase from 2015 to 2016. (3)
- 5.2.3 Calculate the annual population growth (APG) for 2015.

Use the following formula:

$$\text{APG} = \frac{\text{current population} - \text{previous population}}{\text{previous population}} \times 100\% \quad (3)$$