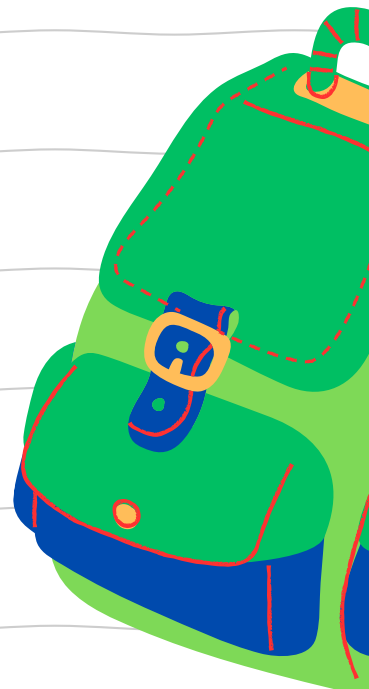


# MATRIC EXAM REVISIONS

MATHEMATICAL LITERACY  
PAPER 2 (2021)



**QUESTION PAPER**





# basic education

Department:  
Basic Education  
**REPUBLIC OF SOUTH AFRICA**

**NATIONAL  
SENIOR CERTIFICATE**

**GRADE 12**

**MATHEMATICAL LITERACY P2**

**NOVEMBER 2021**

**MARKS: 150**

**TIME: 3 hours**

**This question paper consists of 14 pages and an addendum with 4 annexures.**



**INSTRUCTIONS AND INFORMATION**

1. This question paper consists of FIVE questions. Answer ALL the questions.
2. Use the ANNEXURES in the ADDENDUM to answer the following questions:  
  
ANNEXURE A for QUESTION 2  
ANNEXURE B for QUESTION 4.1  
ANNEXURE C for QUESTION 4.3.3  
ANNEXURE D for QUESTION 5.1
3. Number the answers correctly according to the numbering system used in this question paper.
4. Start EACH question on a NEW page.
5. You may use an approved calculator (non-programmable and non-graphical), unless stated otherwise.
6. Show ALL calculations clearly.
7. Round off ALL final answers appropriately according to the given context, unless stated otherwise.
8. Indicate units of measurement, where applicable.
9. Maps and diagrams are NOT drawn to scale, unless stated otherwise.
10. Write neatly and legibly.

## QUESTION 1

1.1

Gadibolae bought Pringles (chips in a cylindrical container) on promotion at a shop. The promotion advertisement is shown below, together with a diagram of the Pringles container with dimensions.

PROMOTION ADVERTISEMENT FOR PRINGLES	DIMENSIONS OF THE CYLINDRICAL PRINGLES CONTAINER
<p style="text-align: center;"><b>6 Pringles for R100,00</b></p> <div style="text-align: center;">  </div> <p><b>Pringles</b> <b>110 g each</b></p> <p style="text-align: center;">Promotion available: From 11 Jan. 2021 to 31 Mar. 2021</p>	<div style="text-align: center;">  </div> <p style="text-align: center;">Diameter = 64 mm Height = 230 mm</p>

[Source: [guzzle.co.za](http://guzzle.co.za)]

Use the information above to answer the questions that follow.


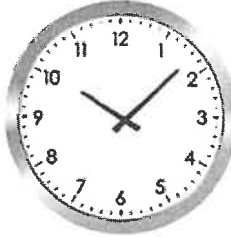
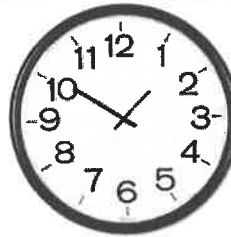

- 1.1.1 Determine (in grams) the total mass of the Pringles promotion bought for R100. (2)
- 1.1.2 Write down the radius of a single Pringles container. (2)
- 1.1.3 Choose the letter of the answer that will make the following statement TRUE.
- The unit to calculate the inner volume of a Pringles container is:
- A.  $\text{mm}^3$
- B.  $\text{mm}^2$
- C.  $64 \times 23 \text{ mm}^2$  (2)
- 1.1.4 Determine the total number of days this promotion is available. (3)
- 1.1.5 Calculate the price of two 110 g Pringles containers in this promotion. (2)

1.2

Paul has entered a motorcycle race. The digital clock in QUESTION 1.2.1 shows the time he finished the race.

The odometer in QUESTION 1.2.2 shows the reading as the motorcycle crossed the finishing line.

Choose an item from COLUMN B to complete the statements in COLUMN A. Write only the letter (A–E) next to the question numbers (1.2.1 and 1.2.2), e.g. 1.2.3 F.

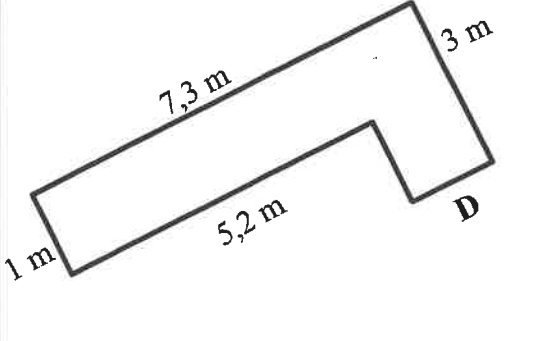
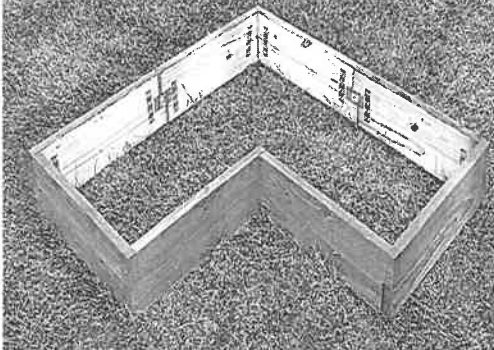
COLUMN A	COLUMN B
<p>1.2.1 The analogue clock that shows the same time as the digital clock below, is ...</p> 	<p>A </p> <p>B </p>
<p>1.2.2 Given the following odometer:</p>  <p>Paul's speed is ...</p>	<p>C 55 km/h</p> <p>D 60 km/h</p> <p>E 680 003 km/h</p>

(2)

(2)

1.3

A wooden L-shaped flower bed is filled with soil. Below is the L-shaped flower bed with dimensions, with **D** as a missing length.

DIMENSIONS OF THE L-SHAPED FLOWER BED	PICTURE: L-SHAPED FLOWER BED
	

[Source: [plantsforafrica.com](http://plantsforafrica.com)]

**NOTE:** All corners are right angles.

Use the information above to answer the questions that follow.

1.3.1 Convert the longest dimension of the L-shaped flower bed to cm. (2)

1.3.2 Calculate the missing length, **D**. (2)

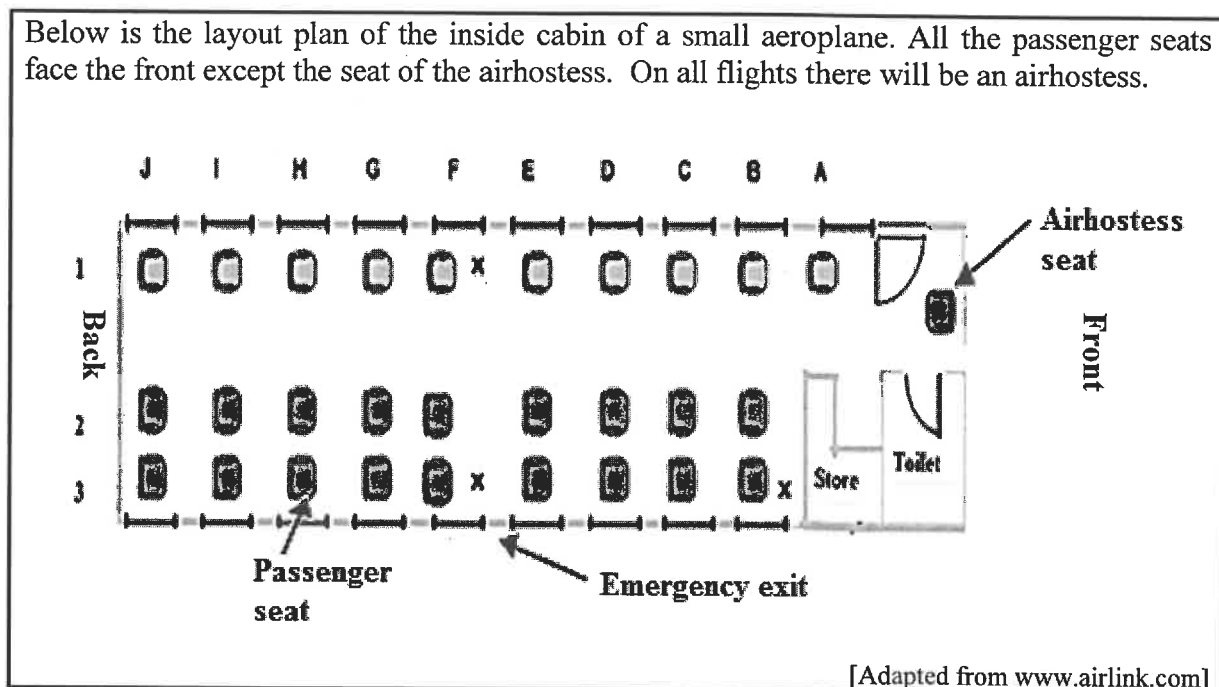
1.3.3 The volume of the flower bed with materials can be calculated as follows:

$$\begin{aligned} \text{Volume} &= (2,1 \text{ m} \times 3 \text{ m} \times 0,5 \text{ m}) + (5,2 \text{ m} \times 1 \text{ m} \times 0,5 \text{ m}) \\ &= 3,15 \text{ m}^3 + 2,6 \text{ m}^3 = 5,75 \text{ m}^3 \end{aligned}$$

State which value in the above calculation represents the height of the flower bed. (2)

1.4

Below is the layout plan of the inside cabin of a small aeroplane. All the passenger seats face the front except the seat of the airhostess. On all flights there will be an airhostess.



[Adapted from [www.airlink.com](http://www.airlink.com)]

Use the information above to answer the questions that follow.

1.4.1 Explain the meaning of a *layout plan*. (2)

1.4.2 Calculate the maximum number of passenger seats available in this aeroplane. (2)

1.4.3 Stofile is seated in D1. He gets out of his seat and walks past his seat and two more seats towards the back to talk to his friend who is seated on Stofile's right-hand side.

Using the same notation as Stofile's seat, write down the seat number of his friend. (2)

1.4.4 During the flight, passengers are allowed to choose a light snack and a drink. The choices are as follows: a muffin or a sandwich with a cola, a juice or bottled water.

Write down the number of options they can choose from. (2)

[29]

**QUESTION 2**

ANNEXURE A shows the floor plan of Jan's house, with a veranda\*, in South Africa.

*\*A veranda, also known as a porch or 'stoep', is an open area with a roof over it.*

The following is an artist's drawing of one of the elevations of Jan's house.



Use ANNEXURE A and the information above to answer the questions that follow.

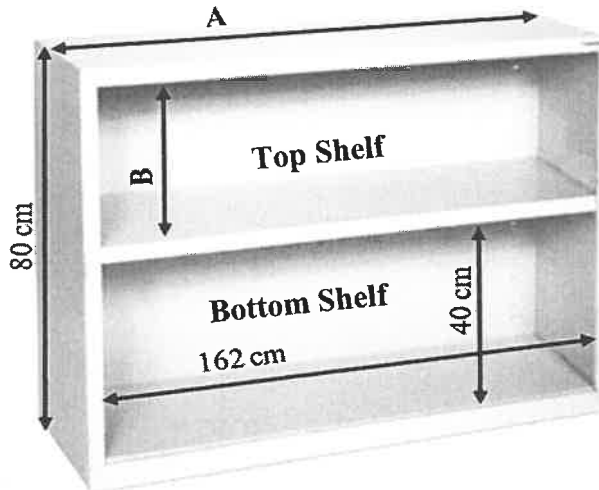
- 2.1 Write down the number of bedrooms on the floor plan. (2)
- 2.2 Which room will be the first room you will enter from the veranda? (2)
- 2.3 In which general direction does the master bedroom window face? (2)
- 2.4 One of the door locks needs to be changed.  
Write down the probability, in simplified fractional form, that it is NOT one of the interior doors. (4)
- 2.5 Jan remarked that the kitchen gets a lot of sunlight.  
Critically comment on his remark. (3)
- 2.6 Give ONE reason why the windows shown in the above drawing do NOT represent the windows of the kitchen and the dining room. (2)



- 2.7 The scale used for the floor plan is 1 cm representing 1 000 mm in real life.
- 2.7.1 Write the given scale in number scale format. (2)
- 2.7.2 Measure the inner length of bedroom 2 and use the given scale to calculate the actual length (in m) of bedroom 2. (4)
- 2.7.3 Jan stated that the given scale is NOT very accurate to use if photocopies were going to be made of the plan.
- Critically comment on his statement and give a reason for your answer. (3)
- [24]**

**QUESTION 3**

Tsidi needs a bookshelf to store her files. She decides to buy a second-hand wooden bookshelf with two shelves, as illustrated below.

**DIMENSIONS:**

Inside width 162 cm

Total outside height 80 cm

Inside height of the  
bottom shelf 40 cm**NOTE:****Area of a rectangle = length  $\times$  width**

Use the information above to answer the questions that follow.

3.1 The top shelf has a thickness of 1,5 cm all around.

3.1.1 Determine **A**, the outside length of the bookshelf. (3)

3.1.2 The base of the bottom shelf is 4,5 cm thick.

Determine **B**, the inside height of the top shelf. (3)

3.2 The total outside height of the bookshelf is 31,496 inches.

Determine (rounded to TWO decimal places) the conversion factor for the height in the form **1 inch = ... cm**. (3)

3.3 Tsidi bought the bookshelf at a discounted price because the backboard which covers the entire width and height of the bookshelf, needed painting. She decides to do the following:

- Remove the backboard.
- Paint the back of the backboard with a single coat of paint.
- Paint the front of the backboard with two coats of paint.
- Nail the backboard to the bookshelf.

3.3.1 Calculate (in  $\text{cm}^2$ ) the area of one side of the backboard. (2)

3.3.2 Convert the answer in QUESTION 3.3.1 to  $\text{m}^2$ . (2)

3.3.3 One litre of paint covers  $6,9 \text{ m}^2$ .

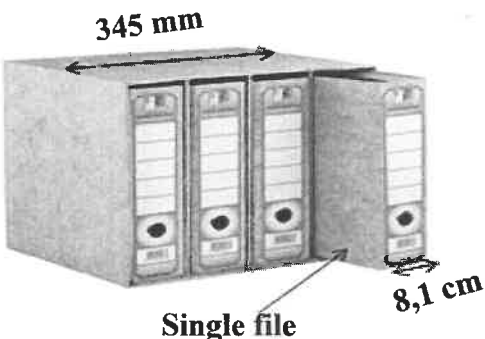
Determine (rounded to TWO decimal places) the number of litres of paint required to paint the backboard completely. (5)

3.3.4 Tsidi stated that one 500 ml can of paint is sufficient to paint the backboard completely.

Verify, with calculations, whether her statement is valid. (3)

3.4

Tsidi wants to organise her documents in files. She was informed that you can store files separately (single files) or in a filing box as shown in the picture below.

PICTURE OF A FILING BOX WITH FILES	MEASUREMENTS
	<p>A single file has a width of 8,1 cm.</p> <p>The width of the filing box is 345 mm</p>

Use the information above to answer the following questions.

3.4.1 Determine the maximum number of filing boxes that could fit on one shelf, which is 162 cm wide. (4)

3.4.2 Calculate the difference in the number of files that she can place on one shelf if she packs the shelf with single files rather than the filing boxes. (5)

3.4.3 Give a possible reason why Tsidi would prefer the filing boxes. (2)

3.4.4 Tsidi bought filing boxes to pack the top shelf completely. She could not remember in which file she placed a document. She randomly chooses one of the files out of the filing boxes. Determine, as a percentage to TWO decimal places, the probability that the file she chooses will contain the document she is looking for. (3)

[35]

**QUESTION 4**

4.1 Mr Venter bought a farm in order to sell chickens and vegetables. On ANNEXURE B is the layout plan of the farmyard.

Use ANNEXURE B to answer the questions that follow.

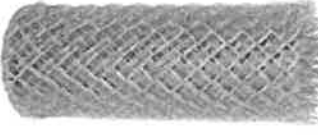
4.1.1 Name the feature on the layout plan which has an irregular shape. (2)

4.1.2 The letter J on the map represents Jojo tanks.  
Give a reason why it is important to have a water tank at one's house. (2)

4.1.3 Jojo tanks are usually filled with rainwater.  
Write down TWO structures where the water to fill a Jojo tank could possibly come from. (2)

4.1.4 Calculate (in m<sup>2</sup>) the area of the garden expansion.  
You may use the following formula:  
**Area of a triangle =  $\frac{1}{2} \times \text{base} \times \text{height}$**  (3)

4.1.5 Mr Venter decides to replace the fence around the circular chicken site. The circumference of the circular site is 18,852 m.

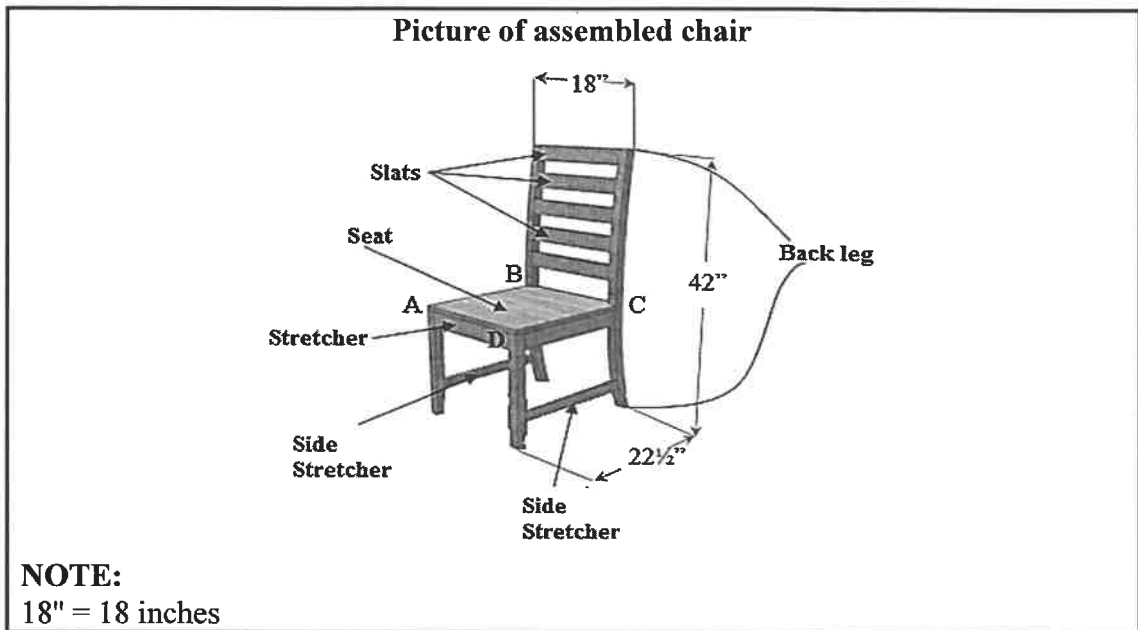
<b>TWO COST OPTIONS FOR THE WIRE MESH</b>	
<b>OPTION A</b> R1 154 for a 10 m roll	<b>OPTION B</b> R127,30 per running metre
 <p style="margin-left: 100px;"><b>Picture of wire mesh</b></p>	

By means of calculations, advise Mr Venter which option is more economical. (5)

4.2 One of the Jojo tanks on his farm has a 5 000 ℓ capacity. The height of the tank is 220 cm.  
**NOTE:** 1 000 cm<sup>3</sup> = 1 ℓ

Calculate (in cm) the radius of the tank.  
You may use the following formula:  
**Volume of a cylindrical tank = 3,142 × (radius)<sup>2</sup> × height** (6)

4.3 Mr Venter bought a chair which still has to be assembled. Below is a picture of the assembled chair showing different parts with some dimensions (in inches).





Use the information above to answer the questions that follow.

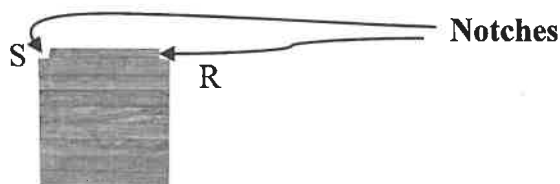
4.3.1 Write the following as a simplified ratio:  
Width of the chair : height of the chair (2)

4.3.2 Convert the height of the chair to mm.  
You may use the following conversions:  
1 000 mm = 3,28084 feet and 12 inches = 1 foot (3)

4.3.3 ANNEXURE C shows pictures and written instructions for the first steps to assemble the chair.  
Choose an assembly instruction from COLUMN B that matches a picture in COLUMN A. Write only the letter ((i) to (iii)) next to the question numbers (4.3.3(a) to 4.3.3(c)) in the ANSWER BOOK. (3)

4.3.4 State whether P or Q represents the side stretcher.  
P  Q  (2)

4.3.5 The seat is shown in the sketch below.



Describe how you would position the seat so that it is attached to the rest of the structure. (Use the given letters A, B, C, D on the picture and S, R on the sketch).

(3)  
[33]

**QUESTION 5**

5.1

Noah is a travelling salesman who lives in the United States of America (USA). He uses a map to estimate his travelling time between cities.

On ANNEXURE D is a partial map which shows the following:

- Various cities
- Distances (in miles) between cities
- Average travelling times (in hours and minutes) between these cities

Use ANNEXURE D to answer the questions that follow.

5.1.1 Choose ONE letter (W, X, Y or Z) that will make EACH of the following statements below TRUE.

- (a) The average time (in hours) to travel between Lee and Springfield is ...

W  $\frac{50}{60}$

X  $\frac{50}{100}$

Y 0,5

Z 41

(2)

- (b) Which city lies southeast of Boston?

W Providence

X Lowell

Y Gloucester

Z Plymouth

(2)

5.1.2 Noah found that the same time 01:05 is estimated for travelling from Providence to Boston and from Springfield to Worcester.

- (a) Write down the actual distances (in miles) from Providence to Boston and from Springfield to Worcester.

(3)

- (b) Give ONE possible reason why the map indicates the same travelling time for these two different distances.

(2)

- 5.1.3 Noah travelled from Portland passing three cities (A, B and C in the table) to reach his destination city, D.

TABLE 1 below shows the time taken to travel between various unknown cities indicated by A, B, C and D.

**TABLE 1: TIME TAKEN BETWEEN CITIES**

START CITY	DESTINATION CITY	TIME TAKEN BETWEEN CITIES
Portland	A	01:35
A	B	$\frac{1}{2}$ hour
B	C	00:35
C	D	1 hour

Name cities A, B, C and D.

(4)

- 5.1.4 The fuel tank of Noah's car has a capacity of 23 gallons. Noah claims that in South Africa it will cost him less than R1 400 to fill up his fuel tank to capacity.

**NOTE:**

- 1 gallon = 3,785 litres
  - Fuel cost R15,97/ ℓ
- [Source: AA Petrol price on 2 March 2021]

Verify, with calculations, whether his claim is valid.

(4)

- 5.1.5 Noah stays in Greenfield and travels to Fitchburg and back, from Monday to Friday. He fills his car's fuel tank on Monday morning. The fuel consumption of his car is 18 miles per gallon. He refuels his car to capacity as soon as he does not have enough fuel to complete a trip between the two cities.

Determine the number of gallons of fuel left in his car's tank on arrival in Greenfield on Friday afternoon.

(8)

- 5.2 A temperature reading of  $-7^{\circ}\text{C}$  was displayed on the screen on the dashboard of Noah's car. Determine (to the nearest ten) the temperature in degrees Fahrenheit.

Use the formula:  $^{\circ}\text{C} = \frac{5}{9} \times (^{\circ}\text{F} - 32)$

(4)  
[29]

**TOTAL: 150**



# basic education

Department:  
Basic Education  
**REPUBLIC OF SOUTH AFRICA**

**NATIONAL  
SENIOR CERTIFICATE**

**GRADE 12**

**MATHEMATICAL LITERACY P2**

**ADDENDUM**

**NOVEMBER 2021**

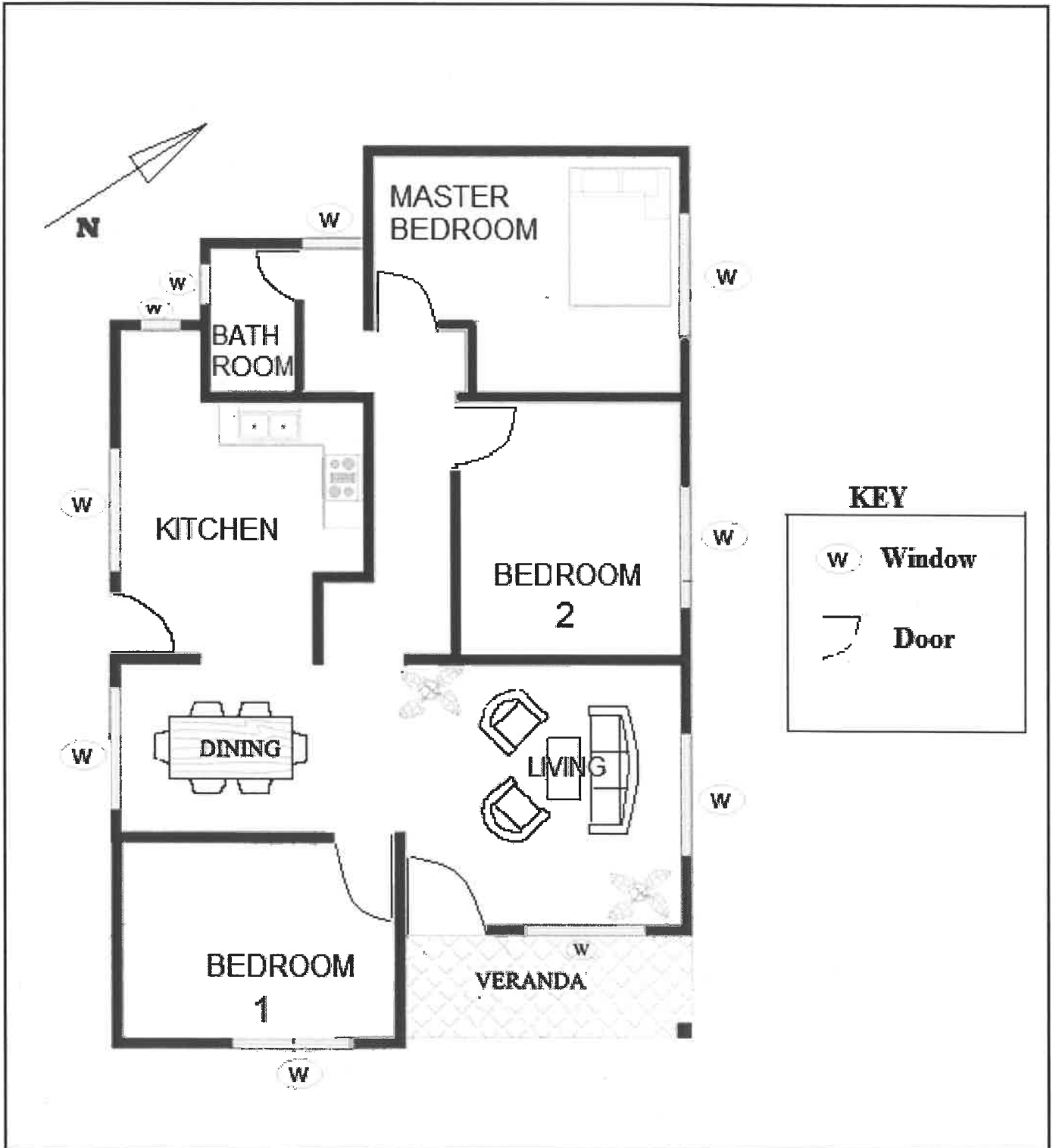
**This addendum consists of 5 pages with 4 annexures.**



**ANNEXURE A**

**QUESTION 2**

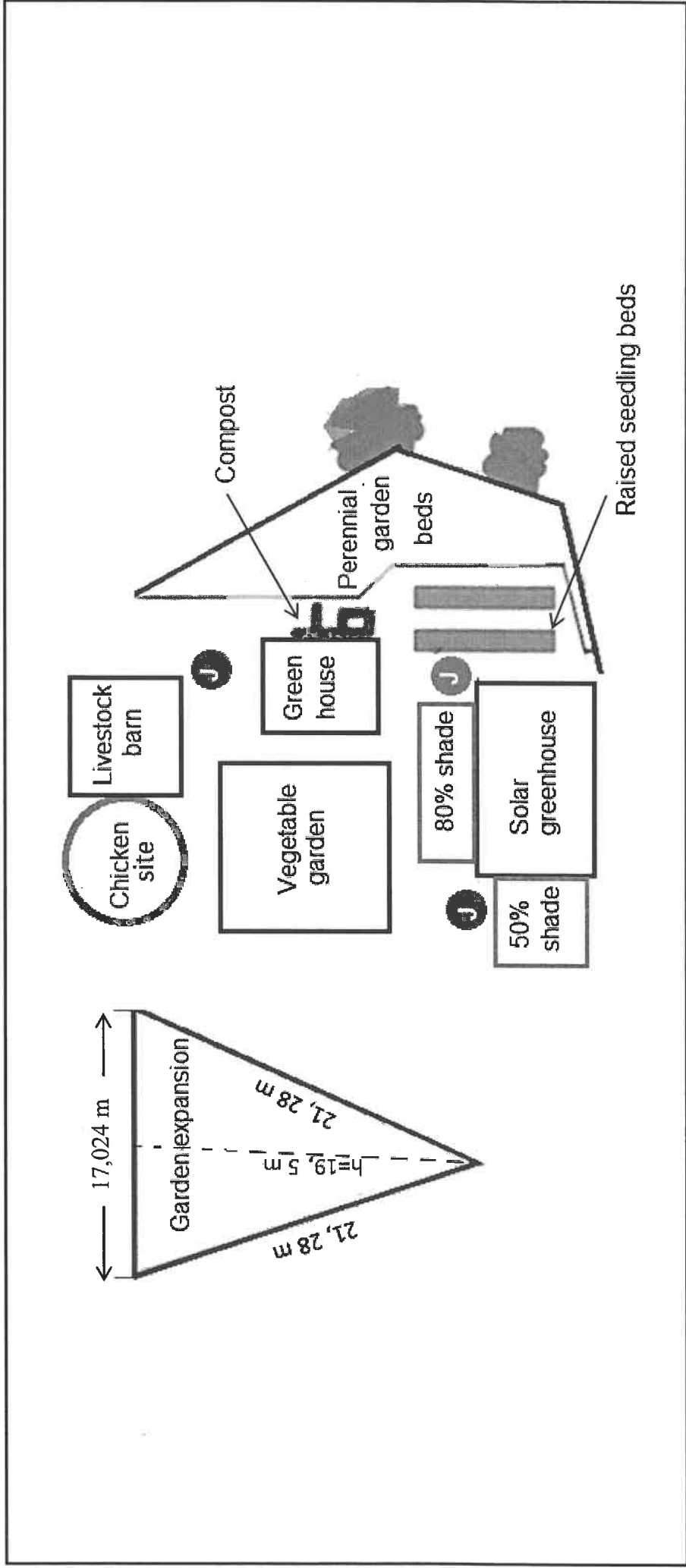
**FLOOR PLAN OF A HOUSE**



**ANNEXURE B**

**QUESTION 4.1**


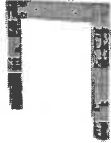

**LAYOUT PLAN OF THE FARMYARD**



**ANNEXURE C**

**QUESTION 4.3.3**

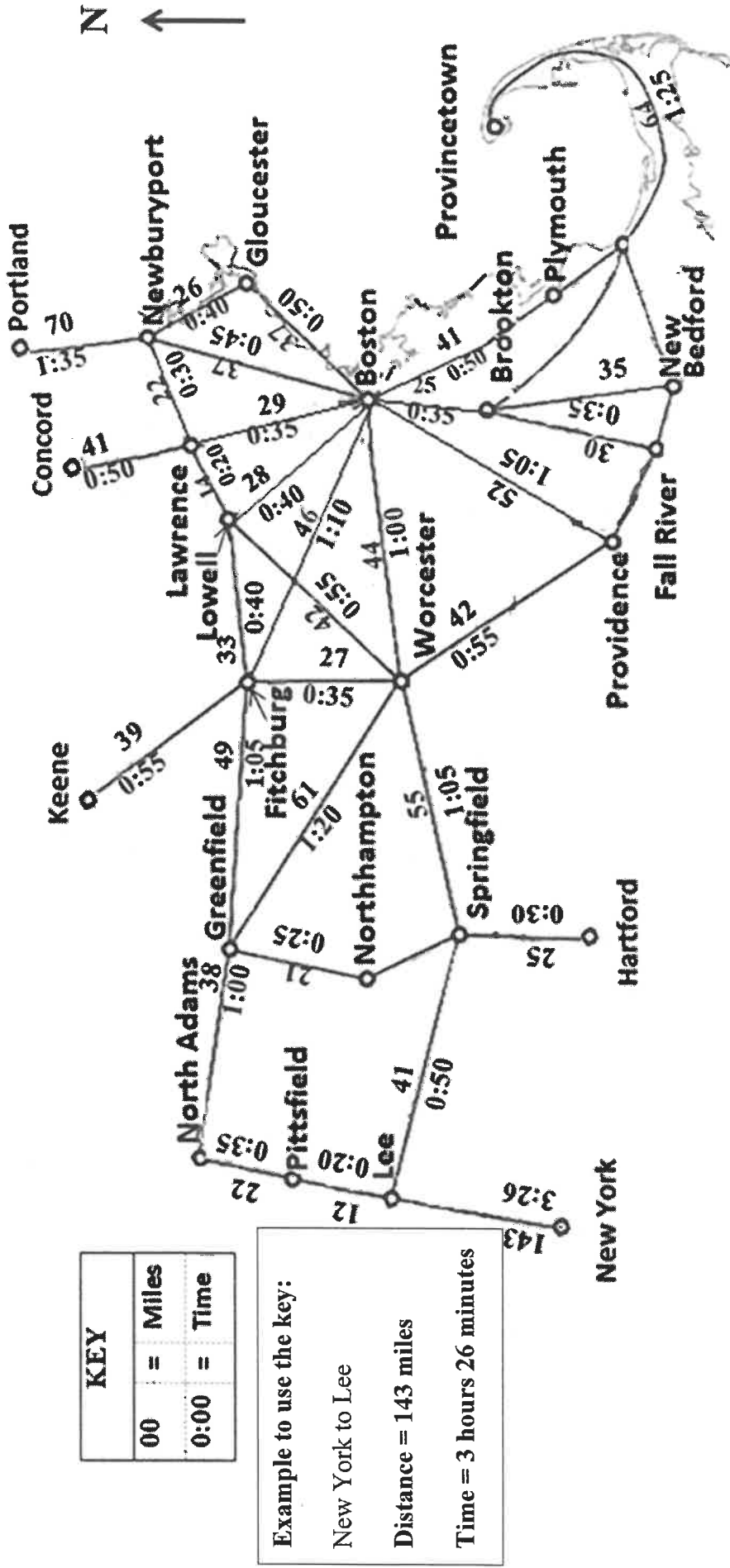
**DIAGRAMS AND SOME ASSEMBLY INSTRUCTIONS FOR THE CHAIR**

COLUMN A	COLUMN B
(a) 	(i) Attach to the stretcher to the front legs as shown, using glue and screws.
(b) 	(ii) Attach the front legs to the back legs with the stretchers.
(c) 	(iii) Secure the back slats using glue and screws. Position the back stretcher on the legs as shown, then secure using glue and screws.

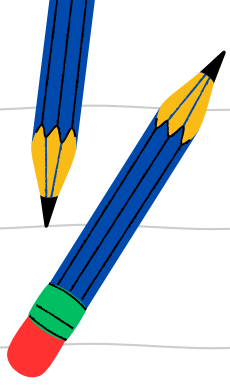
ANNEXURE D

QUESTION 5.1

PARTIAL MAP OF THE UNITED STATES OF AMERICA SHOWING DISTANCES (IN MILES) AND TIME (IN HOURS AND MINUTES) TAKEN BETWEEN VARIOUS CITIES



[Source: Afp-cv.blogspot.com]

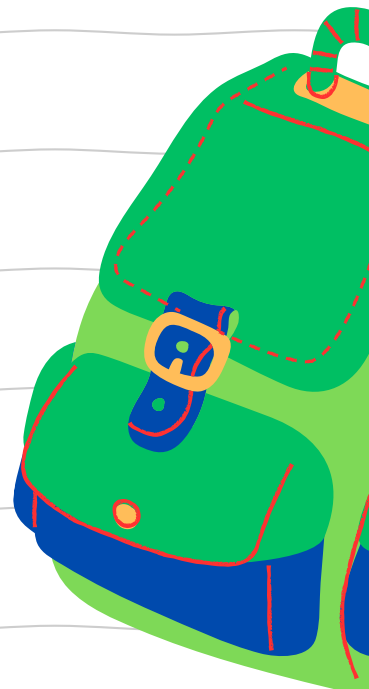


# MATRIC EXAM REVISIONS

MATHEMATICAL LITERACY  
PAPER 2 (2021)



**ANSWER PAPER**





# basic education

Department:  
Basic Education  
**REPUBLIC OF SOUTH AFRICA**

**NATIONAL  
SENIOR CERTIFICATE/NASIONALE SENIOR  
SERTIFIKAAT**

**GRADE/GRAAD 12**

**MATHEMATICAL LITERACY P2/  
WISKUNDIGE GELETERDHEID V2**

**NOVEMBER 2021**

**MARKING GUIDELINES/NASIENRIGLYNE**

**MARKS/PUNTE: 150**

<b>SYMBOL/KODE</b>	<b>EXPLANATION/VERDUIDELIKING</b>
<b>M</b>	Method/ <i>Metode</i>
<b>MA</b>	Method with accuracy/ <i>Metode met akkuraatheid</i>
<b>CA</b>	Consistent accuracy/ <i>Volgehoue akkuraatheid</i>
<b>A</b>	Accuracy/ <i>Akkuraatheid</i>
<b>C</b>	Conversion/ <i>Herleiding</i>
<b>S</b>	Simplification/ <i>Vereenvoudiging</i>
<b>RT</b>	Reading from a table/graph/map/diagram/ <i>Lees vanaf tabel/kaart/grafiek/diagram</i>
<b>SF</b>	Correct substitution in a formula/ <i>Korrekte vervanging in formule</i>
<b>O</b>	Opinion/Explanation/Reasoning / <i>Opinie/Verduideliking/Redenasie</i>
<b>P</b>	Penalty, e.g. for no units, incorrect rounding off, etc./ <i>Penalisering, bv. vir geen eenhede/verkeerde afronding, ens.</i>
<b>R</b>	Rounding off/ <i>Afronding</i>
<b>NPR</b>	No penalty for correct rounding minimum two decimal places/ <i>Geenpenalisering vir korrekte afronding tot twee desimale plekke nie</i>
<b>AO</b>	Answer only/ <i>Slegs antwoord</i>
<b>MCA</b>	Method with constant accuracy/ <i>Metode met volgehoue akkuraatheid</i>

**These marking guidelines consist of 19 pages.  
Hierdienasienriglyne bestaan uit 19 bladsye.**

## NOTE:

- If a candidate answers a question TWICE, only mark the FIRST attempt.
- If a candidate has crossed out (cancelled) an attempt to a question and NOT redone the solution, mark the crossed out (cancelled) version.
- Consistent accuracy (CA) applies in ALL aspects of the marking guidelines; however it stops at the second calculation error.
- Note: consistent accuracy (CA) does not apply in cases of a breakdown.
- If the candidate presents any extra solution when reading from a graph, table, layout plan and map, then penalise for every extra item presented.

As a general marking principle, if a candidate has incurred one mistake and there is evidence of sound mathematics thereafter, then that candidate should lose one mark only.

## LET WEL:

- *As 'n kandidaat 'n vraag TWEE KEER beantwoord, merk slegs die EERSTE poging.*
- *As 'n kandidaat 'n antwoord van 'n vraag doodtrek (kanselleer) en nie oordoen nie, merk die doodgetrekte (gekanselleerde) poging.*
- *Volgehoue akkuraatheid (CA) word in ALLE aspekte van die nasienriglyne toegepas, dit hou op by die tweede berekeningsfout.*
- *Let wel: volgehoue akkuraatheid (CA) geld nie in die geval van 'n afbreuk nie.*
- *Wanneer 'n kandidaat aflesings vanaf 'n grafiek, tabel, uitlegplan en kaart geneem en ekstra antwoorde gee, penaliseer vir elke ekstra item.*
- *'n Algemene merkbeginsel is dat indien 'n kandidaat een fout maak en daarna voortgaan met korrekte wiskunde, dat die kandidaat slegs een punt verloor.*

QUESTION/VRAAG 1 [29 MARKS/PUNTE] Answer Only AO - full marks			
Q/V	Solution/Oplissing	Explanation/Verduideliking	T/L
1.1.1	Total mass/Totale massa = $6 \times 110\text{g}$ ✓MA  = 660 g ✓A	1MA multiply mass by 6  1A mass  (2)	M L1
1.1.2*	Radius = 32 mm ✓✓A	2A radius  (2)	M L1
1.1.3	A ✓✓A	2A correct letter [accept: $\text{mm}^3$ ]  (2)	M L1
1.1.4*	Total No. of days/Totale getal dae = 11 Jan to 31 Mar  ✓ MA = $(31 - 10) + 28 + 31$ ✓ MCA  = $21 + 28 + 31 = 80$ ✓CA	1MA days in Jan 1MCA adding days in 3 months  1CA simplification  (3)	M L1

Q/V	Solution/Oplissing	Explanation/Verduideliking	T/L
1.1.5*	Price for 2 Pringles/Prys vir 2 Pringles $= 2 \left( \frac{R100}{6} \right)$ ✓ MA $= 2 \times R16,666$ $= R33,33$ ✓ CA	1MA dividing price by 6 and multiplying by 2 1CA simplification <b>NPR</b> (2)	M/F L1
1.2.1	A ✓✓ A	2A correct letter (2)	M L1
1.2.2	D ✓✓ A	2A correct letter Accept 60 km/h (2)	M L1
1.3.1	7,3 m = 7,3 × 100 cm ✓ MA = 730 cm ✓ A	1MA multiplying correct value by 100 1A simplification (2)	M L1
1.3.2*	D = 7,3 m – 5,2 m ✓ MA = 2,1 m ✓ CA	1MA difference of correct lengths 1CA simplification (2)	M L1
1.3.3	0,5m ✓✓ A	2A height (2)	M L1
1.4.1*	<p style="text-align: center;">✓A</p> A layout plan is a top view that shows the arrangement of features. ✓A 'n Uitlegplan is die bo-aansig wat die rangskikking van die voorwerpe aantoon. <b>OR/OF</b> A layout plan is the structural arrangement of items within a certain space. 'n Uitlegplan is die strukturele rangskikking van items binne 'n bepaalde ruimte. <b>OR/OF</b> Plan of the entire inside cabin, showing location of seats, exit doors etc. 'n Plan van die hele binnekant van die kajuut wat die posisie van sitplekke, uitgang, deure ens. aantoon <b>OR/OF</b> Drawing to scale showing physical arrangements of all resources that consume space within facilities. 'n Skaaltekening wat die fisiese posisies van al die items van spasie in beslag neem binne die fasiliteit	2Aexplanation (2)	MP L1



<b>Q/V</b>	<b>Solution/Oplissing</b>	<b>Explanation/Verduideliking</b>	<b>T/L</b>
1.4.2*	28 ✓✓A	2A number of seats (2)	MP L1
1.4.3	✓A ✓A G1	1A correct seat 1A correct row (2)	MP L1
1.4.4*	6 ✓✓A	2A correct number (2)	P L1
		<b>[29]</b>	

<b>QUESTION/VRAAG 2 [24MARKS/PUNTE]</b>			
<b>Q/V</b>	<b>Solution/Oplissing</b>	<b>Explanation/Verduideliking</b>	<b>T/L</b>
2.1	3 ✓✓A	2A correct number (2)	MP L2
2.2	Living room/Woonkamer ✓✓A	2A correct room (2)	MP L1
2.3	North East or NE/Noordoos of NO ✓✓A	2A direction (2)	MP L2
2.4*	$P_{\text{not interior/nie binne}} = P_{\text{exterior/buite}}$ $= \frac{2}{6} \quad \checkmark\checkmark\text{RT}$ $= \frac{1}{3} \quad \checkmark\text{A}$ <p style="text-align: center;"><b>OR/OF</b></p> $P_{\text{not interior/nie binne}} = 1 - \frac{4}{6} \quad \checkmark\text{MA}$ $= \frac{2}{6} \quad \checkmark\text{RT}$ $= \frac{1}{3} \quad \checkmark\text{A}$	2RT numerator 1A denominator 1CA simplification <p style="text-align: center;"><b>OR/OF</b></p> 1MA probability of NOT 1RT numerator 1A denominator 1CA simplification (4)	P L2
2.5	$\checkmark\text{A}$ Jan is wrong, the kitchen is on the $\checkmark\checkmark\text{O}$ Southern side. In South Africa it does not get a lot of sun. <i>Jan is verkeerd. Die kombuis is aan die suidlike kant. In Suid-Afrika kry dit nie baie son nie.</i>	1A wrong 2O reasoning (3)	MP L4
2.6	It cannot be the view showing the kitchen and dining room, as it does not show the extra window for the bathroom. $\checkmark\checkmark\text{O}$ <i>Dit kannie die kombuis en eetkamer wees nie want dit wys nie die venster van die badkamer nie.</i> It does not show the other rooms on both sides of the windows. <i>Dit wys nie die ander kamers weerskante van die vensters nie.</i> <p style="text-align: center;"><b>OR/OF</b></p> It shows the veranda, door, bedroom and livingroom windows. <i>Dit wys die stoep, deur en slaapkamer en woonkamervensters.</i> <p style="text-align: center;"><b>OR/OF</b></p>	2O reason	MP L4

Q/V	Solution/Oplissing	Explanation/Verduideliking	T/L
	<p style="text-align: center;"><b>OR/OF</b></p> <p>Because there is no veranda on the side of the kitchen and the picture shows the veranda.  <i>Daar is nie 'n stoep aan die kombuis se kant nie en die prent toon 'n stoep</i></p> <p style="text-align: center;"><b>OR/OF</b></p> <p>The drawing shows the SE elevation and the kitchen is on the SW side.  <i>Die prent toon die SO aansien die kombuis is aan die SW kant.</i></p> <p style="text-align: center;"><b>OR/OF</b></p> <p>The windows shown does not look like kitchen windows, they are too big.  <i>Die vensters wat aangetoon word lyk nie soos kombuisvensters nie, hulle is te groot</i></p> <p style="text-align: center;"><b>OR/OF</b></p> <p>The drawing represents the front view.  <i>Die prent is die vooraansig</i></p> <p style="text-align: center;"><b>OR/OF</b></p> <p>Kitchen should be on the left-hand side with the window and door / The door knob is on the right-hand side and not on the left-hand side of the door adjacent to the kitchen window.  <i>Kombuis moet aan die linkerkant met die vensterendeur wees / Die deurknop is aan die regterkant en nie aan die linkerkant van die deur wat grens aan die kombuisvenster nie.</i></p>	(2)	
2.7.1*	$10 \text{ mm} : 1\,000 \text{ mm} \quad \checkmark A$ $= 1 : 100 \quad \checkmark CA$ <p style="text-align: center;"><b>OR/OF</b></p> $1 \text{ cm} : 100 \text{ cm} \quad \checkmark A$ $= 1 : 100 \quad \checkmark CA$	<p>1A correct ratio and conversion  1CA simplification</p> <p style="text-align: center;"><b>OR/OF</b></p> <p>1A correct ratio and conversion  1CA simplification</p> <p><b>AO</b></p> <p style="text-align: right;">(2)</p>	MP L2
2.7.2	$\text{Length on floor plan/Lengte op die vloerplan} = 4,4 \text{ cm} \quad \checkmark A$ $1 \text{ cm} = 100 \text{ cm}$ $4,4 \text{ cm} = 4,4 \times 100 \text{ cm} \quad \checkmark MCA$ $= 440 \text{ cm} \quad \checkmark CA$ $= 4,4 \text{ m} \quad \checkmark C$ <p style="text-align: center;"><b>OR/OF</b></p>	<p>CA from 2.7.1  1A correct measurement</p> <p>1MCA using the scale  1CA simplification  1C conversion  Accept 4,3 m to 4,5 m</p>	MP L3

Q/V	Solution/Oplissing	Explanation/Verduideliking	T/L
	<p>1 cm is 1 000 mm  <math>\checkmark</math>A            4,4 cm is 4 400 mm <math>\checkmark</math>MCA <math>\checkmark</math>CA            4 400 mm = 4,4 m <math>\checkmark</math>C</p> <p style="text-align: center;"><b>OR/OF</b></p> <p>1cm : 1 000 mm <math>\checkmark</math>MCA            1cm : 1 m <math>\checkmark</math>C  <math>\checkmark</math>A            4,4 cm : 4,4 m <math>\checkmark</math>CA</p>	<p>1A correct measurement            1MCA using the scale            1CA simplification            1C conversion</p> <p style="text-align: center;"><b>OR/OF</b></p> <p>1MCA using the scale            1C conversion            1A correct measurement            1CA simplification</p> <p style="text-align: right;">(4)</p>	
2.7.3	<p>Jan is correct. <math>\checkmark</math>A</p> <p style="text-align: center;"><math>\checkmark\checkmark</math>O</p> <p>When a photocopy is made the size of the plan may change while the number scale remains the same.</p> <p><i>Jan is korrek.</i>  <i>Wanneer jy 'n fotostaat maak, kan die grootte van die plan verander en die getalskaal bly dieselfde</i></p>	<p>1A opinion            2O verification</p> <p style="text-align: right;">(3)</p>	MP L4
		<b>[24]</b>	

QUESTION/VRAAG 3 [35 MARKS/PUNTE]			
Q/V	Solution/Oplissing	Explanation/Verduideliking	T/L
3.1.1	$\begin{aligned} & \checkmark\text{RT} & & \checkmark\text{MA} \\ \mathbf{A} &= 162 \text{ cm} + 1,5 \text{ cm} + 1,5 \text{ cm} \\ &= 162 \text{ cm} + (1,5 \text{ cm} \times 2) \\ &= 165 \text{ cm} & \checkmark\text{CA} \end{aligned}$	1RT inside length 1MA adding both sides  1CA simplification  (3)	M L1
3.1.2*	$\begin{aligned} & \checkmark\text{RT} & & \checkmark\text{MA} \\ \mathbf{B} &= 80 \text{ cm} - (40 \text{ cm} + 4,5 \text{ cm} + 1,5 \text{ cm} + 1,5 \text{ cm}) \\ &= 32,5 \text{ cm} & \checkmark\text{CA} \end{aligned}$	1RT both heights 1MA subtracting 1CA simplification  (3)	M L1
3.2	$\begin{aligned} 31,496 \text{ inches/duim} &= 80 \text{ cm} & \checkmark\text{RT} \\ 1 \text{ inch/duim} &= \frac{80}{31,496} \text{ cm} & \checkmark\text{MA} \\ &= 2,54 \text{ cm} & \checkmark\text{A} \end{aligned}$	1RTheight 80 cm  1MA dividing by 31,496  1A simplification  (3)	M L2
3.3.1	$\begin{aligned} \text{Area of a rectangle} &= \text{length} \times \text{width} \\ \text{Opp van 'n reghoek} &= \text{lengte} \times \text{breedte} \\ &= 165 \text{ cm} \times 80 \text{ cm} & \checkmark\text{MCA} \\ &= 13\,200 \text{ cm}^2 & \checkmark\text{CA} \end{aligned}$	CA from 3.1.1  1MCA substitution  1CA simplification  (2)	M L2
3.3.2*	$\begin{aligned} \text{Area of a rectangle} &= 13\,200 \text{ cm}^2 \\ &= \frac{13200}{(100)^2} \text{ m}^2 & \checkmark\text{MCA} \\ &= 1,32 \text{ m}^2 & \checkmark\text{CA} \end{aligned}$ <div style="border: 1px solid black; padding: 5px; display: inline-block; margin-left: 20px;"> <math display="block">\begin{aligned} \text{or Area} &amp;= 1,65 \times 0,8 \\ &amp;= 1,32 \text{ m}^2 \end{aligned}</math> </div>	CA from 3.3.1  1MCA dividing by $100^2$ or 10 000 1CA simplification AO  (2)	M L2
3.3.3	$\begin{aligned} 1 \ell \text{ covers/bedek} & 6,9 \text{ m}^2 \\ n \ell \text{ covers/bedek} & 1,32 \text{ m}^2 \\ n &= \frac{1,32}{6,9} & \checkmark\text{MA} \\ &= 0,1913... \ell & \checkmark\text{CA} \end{aligned}$ <p>To paint three coats/ Om drie lae te verf</p> $\begin{aligned} & \checkmark\text{MA} \\ 0,1913... \ell \times 3 &= 0,57 \ell & \checkmark\text{CA} \\ & \checkmark\text{R} \end{aligned}$	CA from 3.3.2  1MA dividing by 6,9  1CA simplification  1MA multiplying with 3 1CA simplification 1R rounding	M L3

Q/V	Solution/Oplissing	Explanation/Verduideliking	T/L
	<p style="text-align: center;"><b>OR/OF</b></p> <p>Total area to cover / <i>Totale oppervlakte om te dek</i>  <math>\checkmark</math>MA  <math>= 1,32 \text{ m}^2 \times 3 = 3,96 \text{ m}^2</math> <math>\checkmark</math>CA</p> <p>1 ℓ covers/<i>bedek</i> <math>6,9 \text{ m}^2</math>  <i>x</i> ℓ covers /<i>bedek</i> <math>3,96 \text{ m}^2</math></p> $x = \frac{3,96}{6,9} = 0,57 \text{ ℓ}$ $\checkmark$ MA $\checkmark$ CA $\checkmark$ R <p style="text-align: center;"><b>OR/OF</b></p> <p>Paint needed/<i>Verf benodig</i>  <math>\checkmark</math>MA  <math>= \frac{1,32 \times 2}{6,9} \text{ ℓ} + \frac{1,32}{6,9} \text{ ℓ}</math> <math>\checkmark</math>MA</p> $\checkmark$ CA $\checkmark$ CA $= 0,38 \text{ ℓ} + 0,19 \text{ ℓ}$ $= 0,57 \text{ ℓ}$ $\checkmark$ R <p style="text-align: center;"><b>OR/OF</b></p> <p>Total area to cover / <i>Totale oppervlakte om te dek</i>  <math>\checkmark</math>MA <math>\checkmark</math>CA  <math>= 1,32 \text{ m}^2 \times 3 = 3,96 \text{ m}^2</math></p> <p>Spread rate/ <i>Spreikoers</i> = <math>\frac{1 \text{ ℓ}}{6,9 \text{ m}^2}</math> <math>\checkmark</math>MA  <math>= 0,144 \dots \text{ ℓ/m}^2</math></p> <p>Total amount of litres / <i>Totale aantal liters</i>  <math>= 0,144 \times 3,96</math> <math>\checkmark</math>CA  <math>= 0,57 \text{ ℓ}</math> <math>\checkmark</math>R</p> <p style="text-align: center;"><b>OR/OF</b></p> <p>Spread rate/ <i>Spreikoers</i> = <math>\frac{1 \text{ ℓ}}{6,9 \text{ m}^2}</math> <math>\checkmark</math>MA  <math>= 0,144 \dots \text{ ℓ/m}^2</math></p> <p>Paint needed for 1 coat/ <i>Verf nodig vir 1 laag</i>  <math>= 0,144 \times 1,32 = 0,19 \dots \text{ ℓ}</math> <math>\checkmark</math>CA</p> <p>Paint needed for 3 coats/ <i>Verf nodig vir 3 lae</i>  <math>\checkmark</math>MA  <math>= 0,19 \dots \times 3</math> <math>\checkmark</math>CA  <math>= 0,57 \text{ ℓ}</math> <math>\checkmark</math>R</p>	<p>1MA multiplying with 3              1CA simplification</p> <p>1MA dividing by 6,9              1CA simplification              1R rounding</p> <p style="text-align: center;"><b>OR/OF</b></p> <p>1MA dividing by 6,9              1MA adding the 2 coats and 1              1CA simplification              1CA simplification              1R rounding</p> <p style="text-align: center;"><b>OR/OF</b></p> <p>1MA multiplying with 3              1CA simplification              1MA dividing by 6,9</p> <p>1CA simplification              1R rounding</p> <p style="text-align: center;"><b>OR/OF</b></p> <p>1MA dividing by 6,9</p> <p>1CA simplification</p> <p>1MA multiplying with 3              1CA simplification              1R rounding</p> <p style="text-align: right;">(5)</p>	
3.3.4	$0,57 \text{ ℓ} \times 1\,000$ $\checkmark$ MCA $= 570 \text{ ml}$ $\checkmark$ CA <p>Not valid <math>\checkmark</math>O  <i>Nie geldig nie</i></p>	<p>1MCA (from Q3.3.3 multiply              by 1 000)              1CA simplification</p> <p>1O verification</p>	<p>M              L4</p>

Q/V	Solution/Oplissing	Explanation/Verduideliking	T/L
	<p style="text-align: center;"><b>OR/OF</b></p> <p>500 ml ÷ 1 000 ✓MCA</p> <p>= 0,5 ℓ less than 0,57ℓ ✓CA</p> <p>Tsidi's statement is invalid ✓O</p> <p style="text-align: center;"><b>OR/OF</b></p> <p>1ℓ covers/bedek 6,9 m<sup>2</sup></p> <p>500 ml covers/bedek <math>\frac{6,9}{2} = 3,45 \text{ m}^2</math> ✓MCA</p> <p style="text-align: right;">✓CA</p> <p>Area to paint / Opp om te verf = 1,32 m<sup>2</sup> × 3 = 3,96 m<sup>2</sup></p> <p>The paint is not enough / invalid ✓O</p> <p>Die verf is nie genoeg / nie geldig</p> <p style="text-align: center;"><b>OR/OF</b></p> <p>Coverage per coat/Dekking per laag</p> <p>= <math>\frac{500 \text{ ml}}{3} = \frac{0,5 \text{ ℓ}}{3} = 0,166..</math> ✓MCA</p> <p>Coverage /Dekking = 0,166 × 6,9 ✓CA</p> <p>= 1,15 m<sup>2</sup></p> <p>1,32 m<sup>2</sup> needs to be covered per coat/moet per laag gedek word.</p> <p>Not valid / Nie geldig nie ✓O</p>	<p style="text-align: center;"><b>OR/OF</b></p> <p>1MCA (from Q3.3.3 dividing by 1 000)</p> <p>1CA simplification</p> <p>1O verification</p> <p style="text-align: center;"><b>OR/OF</b></p> <p>1MCA area</p> <p>1CA simplification</p> <p>1O verification</p> <p style="text-align: center;"><b>OR/OF</b></p> <p>1MCA dividing</p> <p>1CA simplification</p> <p>1O verification</p> <p style="text-align: right;">(3)</p>	
3.4.1*	<p>Number of boxes/ Getal bokse</p> <p>= <math>\frac{162 \text{ cm}}{34,5 \text{ cm}}</math> ✓MA ✓C</p> <p>= 4,695... ✓CA</p> <p>∴ 4 boxes ✓R</p> <p style="text-align: center;"><b>OR/OF</b></p> <p>Number of boxes/ Getal bokse</p> <p>= <math>\frac{1\ 620 \text{ mm}}{345 \text{ mm}}</math> ✓C ✓MA</p> <p>= 4,695... ✓CA</p> <p>∴ 4 boxes ✓R</p>	<p>1MA dividing</p> <p>1C conversion</p> <p>1CA simplification</p> <p>1R rounding down</p> <p style="text-align: center;"><b>OR/OF</b></p> <p>1C conversion</p> <p>1MA dividing</p> <p>1CA simplification</p> <p>1R rounding down</p> <p style="text-align: right;">(4)</p>	M L2 #





<b>QUESTION/VRAAG 4 [33 MARKS/PUNTE]</b>			
<b>Q/V</b>	<b>Solution/Oplissing</b>	<b>Explanation/Verduideliking</b>	<b>T&amp;L</b>
4.1.1	<p style="text-align: center;">✓✓A</p> <p>Perennial garden bed./Meerjarige tuinbeddings</p> <p style="text-align: center;"><b>OR/OF</b></p> <p>Compost / Kompos</p>	<p>2A correct feature</p> <p style="text-align: right;">(2)</p>	<p>MP</p> <p>L2</p>
4.1.2	<p>Water is scarce/Water is skaars</p> <p style="text-align: center;"><b>OR/OF</b></p> <p>Rain water is free compared to tap water</p> <p>Reënwater is gratis in vergelyking met kraanwater ✓✓O</p> <p style="text-align: center;"><b>OR/OF</b></p> <p>Pay less water bills/Betaal minder vir water</p> <p style="text-align: center;"><b>OR/OF</b></p> <p>Water storage/ om water te stoor</p> <p style="text-align: center;"><b>OR/OF</b></p> <p>To save water for future use</p> <p>Om water te spaar vir toekomstige gebruik</p> <p style="text-align: center;"><b>OR/OF</b></p> <p>To harvest rain water</p> <p>Om reënwater op te gaar</p>	<p>2A Reason</p> <p style="text-align: right;">(2)</p>	<p>MP</p> <p>L4</p>
4.1.3	<p>Greenhouse roof/ gutters / Kweekhuis dak/geute ✓O</p> <p style="text-align: center;"><b>OR/OF</b></p> <p>Livestock Barn roof/ gutters / Vee stoor dak/geute ✓O</p> <p style="text-align: center;"><b>OR/OF</b></p> <p>Solar greenhouse roof / gutters/ Sonkrag kweekhuis</p>	<p>1A correct structure</p> <p>1A 2nd correct structure</p> <p>Accept roof <b>and</b> gutter /pipe full marks</p> <p>(Any 2 structures)</p> <p style="text-align: right;">(2)</p>	<p>MP</p> <p>L4</p>
4.1.4	<p style="text-align: center;">✓RT ✓RT</p> <p>Area/Oppervlakte = <math>\frac{1}{2} \times 17,024 \text{ m} \times 19,5 \text{ m}</math></p> <p style="text-align: center;">= 165,984 m<sup>2</sup> ✓CA</p>	<p>1RT correct height</p> <p>1RT correct base</p> <p>1CA area of a triangle</p> <p>NPR</p> <p style="text-align: right;">(3)</p>	<p>M</p> <p>L2</p>
4.1.5	<p>Option/Opsie A = R1 154 × 2 ✓MA</p> <p style="text-align: right;">= R2 308 ✓CA</p> <p>Option/Opsie B = R127,30 × 19 ✓MA</p> <p style="text-align: right;">= R2 418,70 ✓CA</p> <p>Option A. ✓O</p> <p>Opsie A.</p>	<p>1MA multiply by 2</p> <p>1CA option A cost</p> <p>1MA multiply by 19</p> <p>1CA option B cost</p> <p>1O best option</p> <p style="text-align: right;">(5)</p>	<p>MF</p> <p>L4</p>

Q/V	Solution/Oplossing	Explanation/Verduideliking	T&L
4.2	$\text{Volume} = 3,142 \times r^2 \times \text{height/hoogte}$ $\checkmark\text{SF}$ $5000 \ell = 3,142 \times r^2 \times 220 \text{ cm}$ $\checkmark\text{C}$ $5000 \ 000 = 691,24 \times r^2$ $\frac{5 \ 000 \ 000}{691,24} = r^2 \quad \checkmark\text{M}$ $7233,377698 = r^2 \quad \checkmark\text{S}$ $\sqrt{7233,377698} = r \quad \checkmark\text{M}$ $85,05 \text{ cm} = r \quad \checkmark\text{CA}$	<p>1SF substituting 5000</p> <p>1C converting <math>\ell</math> to <math>\text{cm}^3</math></p> <p>1M dividing by 691,24</p> <p>1S simplification</p> <p>1M finding square root</p> <p>1CA radius value NPR</p> <p>(6)</p>	M L3
4.3.1*	$18 : 42 \quad \checkmark\text{A}$ $= 3 : 7 \quad \checkmark\text{CA}$	<p>1A correct order and values</p> <p>1CA only if one value is correct or reversed order</p> <p>(2)</p>	MP L1
4.3.2	$\text{Height/hoogte} = \frac{42''}{12''} = 3,5 \text{ feet/voet} \quad \checkmark\text{MA}$ $3,28084 \text{ feet/voet} = 1 \ 000 \text{ mm}$ $\therefore 3,5 \text{ feet/voet} = \frac{3,5}{3,28084} \times 1 \ 000 \quad \checkmark\text{C}$ $= 1 \ 066,799 \dots \text{mm} \quad \checkmark\text{CA}$ <p style="text-align: center;"><b>OR/OF</b></p> $3, \ 28084 \text{ feet} = 1 \ 000 \text{mm}$ $1 \text{ foot} = n \quad \checkmark\text{MA}$ $n = 304,79999 \text{mm}$ $1 \text{ foot} = 12 \text{ inches}$ $\text{Then } 12 \text{ inches} = 304,79999 \text{mm}$ $1 \text{ inch} = \frac{304,79999 \text{mm}}{12} \quad \checkmark\text{C}$ $= 25,39999 \text{ mm}$ $\text{Therefore } 42 \text{ inches} = 42 \times 25,39999 \text{mm}$ $= 1066, \ 7999 \text{mm}$ $= 1 \ 066,8 \text{ mm} \quad \checkmark\text{CA}$	<p>1MA converting to feet</p> <p>1C converting to mm</p> <p>1CA simplification</p> <p style="text-align: center;"><b>OR/OF</b></p> <p>1MA converting to feet</p> <p>1C converting to mm</p> <p>1CA simplification NPR</p> <p>(3)</p>	M L2

Q/V	Solution/Oplissing	Explanation/Verduideliking	T&L
4.3.3	(a) iii ✓A (b) i ✓A (c) ii ✓A	3A correct Roman numeral  (3)	MP L1
4.3.4	Q ✓✓A	2A correct letter  (2)	MP L1
4.3.5*	✓✓A The notch labelled S is placed against B and the notch labelled R is placed against C ✓A <i>Die sitplek word bo-op die kantspanstukke geplaas</i> <i>Die uitkeping S word op B geplaas en die uitkeping R</i> <i>word teen C geplaas.</i>	2A mentioning the position of the 1st notch 1A second notch  (3)	MP L4
		[33]	



Q/V	Solution/Oplissing	Explanation/Verduideliking	T&L
5.1.4	<p>Number of litres in 23 gallons/<i>Getal liter in 23 gelling</i></p> <p><math>= 3,785 \times 23 \quad \checkmark C</math></p> <p><math>= 87,055 \text{ litre} \quad \checkmark S</math></p> <p>Cost of 87,055 litre/ <i>Prys vir 87,055 liter</i></p> <p><math>= 87,055 \times R15,97</math></p> <p><math>= R1\ 390,27 \quad \checkmark CA</math></p> <p>Valid/ <i>Geldig.</i> <math>\checkmark O</math></p> <p style="text-align: center;"><b>OR/OF</b></p> <p>Number of litres / <i>Getal liter</i></p> <p><math>= \frac{R1400}{R\ 15,97}</math></p> <p><math>= 87,664.. \text{ litre} \quad \checkmark S</math></p> <p>Number of gallons / <i>Getal gellings</i></p> <p><math>= \frac{87,664}{3,785} \quad \checkmark C</math></p> <p><math>= 23,16 \text{ gallons} \quad \checkmark CA</math></p> <p>Can buy more with R1 400/<i>Kan meer koop met R 1400</i></p> <p>Valid / <i>Geldig</i> <math>\checkmark O</math></p>	<p>1C gallons to litre</p> <p>1S simplification</p> <p>1CA cost of fuel</p> <p>1O conclusion</p> <p style="text-align: center;"><b>OR/OF</b></p> <p>1S simplification</p> <p>1C gallons to litre</p> <p>1CA cost of fuel</p> <p>1O conclusion</p> <p><b>NPR</b></p>	<p>MF L4</p> <p style="text-align: right;">(4)</p>

Q/V	Solution/Oplossing	Explanation/Verduidelik	T/L
5.1.5	<p>1 full tank of fuel/ 1 vol tenk = 23 gallons /gelling ✓ A He can travel/ Hykan reis = <math>23 \times 18 = 414</math> miles</p> <p>Distance/afstand ✓ RT Greenfield - Fitchburg = 49 miles/myl Number of trips on 1 full tank /Getalritte met 1 voltenk</p> $= \frac{414}{49} = 8,448..$ <p>✓ CA ∴ 8 trips on 1 full tank / 8 ritte met 1 voltenk</p> <p>So, then he will fill tank back to 23 gallons Dan hervulhy die tenk tot 23 gelling</p> <p>Amount of fuel for 1 return trip/ brandstofvir 1 heen-en-weer reis</p> $= \frac{98}{18} = 5,44 \text{ gallon}$ <p>✓ CA ✓ CA Left in a tank is <math>23 - 5,44 = 17,56</math> gallons. Oor in die tenk is <math>23 - 5,44 = 17,56</math> gelling</p> <p style="text-align: center;"><b>OR/OF</b> ✓ RT</p> <p>Distance/afstand<sub>(Greenfield and Fitchburg)</sub> = 49 miles/myl</p> <p>Weekly must travel/ moet weekliks ry = <math>5 \times 2 = 10</math> trips ✓ MA</p> <p>He can travel = <math>23 \times 18 = 414</math> miles with a full tank. Hy kan 414 myl ry met 'n vol tenk, 8 trips is <math>49 \times 8 = 392</math> miles – now he needs to refill after Thursday's trips 8 ritte is 392 myl – dan hervul hy na Donderdag se terugkeer.</p> <p>With the full tank he only needs to travel Friday return trip / Hyrydanslegs Vrydag heen-en-weer Friday trip: <math>49 \times 2 = 98</math> miles / myl</p> $\frac{98}{18} = 5,44 \text{ gallons/ gelling}$ <p>✓ MA ✓ CA Left in a tank is <math>23 - 5,44 = 17,56</math> gallons. Daar is <math>23 - 5,44 = 17,56</math> gelling in die tenk oor</p>	<p>1A travel distance</p> <p>1RT trip distance</p> <p>1MA dividing</p> <p>1CA number of trips</p> <p>1MA dividing 1CA simplification</p> <p>1MA subtracting 1CA simplification</p> <p style="text-align: center;"><b>OR/OF</b></p> <p>1RT trip distance</p> <p>1MA weekly miles</p> <p>1MA multiply</p> <p>1A travel distance</p> <p>1MA dividing 1CA usage on last day</p> <p>1MA subtracting 1CA diff. between capacity and used gallons</p>	<p>M</p> <p>L3</p>

Q/V	Solution/Oplossing	Explanation/Verduideliking	T/L
	<p>18 miles on 1 gallon / 18 myl op 1 gelling</p> <p>✓ RT 49 miles on x gallon / 49 myl op x gelling</p> <p><math>x = \frac{48}{18} = 2,722\dots</math> gallon per trip / gelling per rit ✓ MA ✓ A</p> <p>Number of trips on 1<sup>st</sup> full tank / Getalritte met 1<sup>st</sup> voltenk</p> <p><math>= \frac{23}{2,722\dots} = 8,44\dots</math> ✓ CA</p> <p>∴ 8 trips before he fills up again / 8 rittevoorhyweervolmaak</p> <p>∴ 2 trips with second full tank/ 2 ritte met die 2de voltenk</p> <p>Fuel used / Brandstofverbruik</p> <p>✓ MA ✓ CA <math>= 2,722\dots \times 2 = 5,44\dots</math> gallon / gelling</p> <p>Left in the tank / Oor in die tenk</p> <p>✓ MA ✓ CA <math>= 23 - 5,44\dots = 17,56</math> gallon / gelling.</p> <p style="text-align: center;"><b>OR/OF</b></p> <p>Single Trip/Enkelrit = 49 miles /myl ✓ RT</p> <p>Number of gallons for 1 trip/ Getal gelling vir 1 rit</p> <p><math>= 49 \div 18 = 2,72</math> ✓ MA ✓ A</p> <p>Number of gallons for return trip/ virretoerrit</p> <p><math>= 2,72 \times 2 = 5,44</math> ✓ CA</p> <p>23 gallons/gelling <math>\div 5,44 = 4,22</math> days/dae ✓ MA ✓ CA</p> <p style="text-align: center;"><math>\approx 4</math> days/dae</p> <p>No of gallons left / Hoeveelheid gelling oor</p> <p><math>= 23 - 5,44 = 17,56</math> gallons ✓ MA ✓ CA</p> <p style="text-align: center;"><b>OR/OF</b></p>	<p>1RT trip distance 1MA dividing 1A travel distance</p> <p>1CA number of trips</p> <p>1MA multiplying 1CA simplification</p> <p>1MA subtracting 1CA simplification</p> <p style="text-align: center;"><b>OR/OF</b></p> <p>1RT trip distance</p> <p>1MA dividing 1A travel distance</p> <p>1CA number of trips 1MA dividing 1CA simplification</p> <p>1MA subtracting 1CA simplification</p> <p style="text-align: center;"><b>OR/OF</b></p>	

Q/V	Solution/Oplossing	Explanation/Verduideliking	T/L		
	<p> <math>23 \times 18 = 414</math> miles/myl ✓A                      ✓ RT ✓MA                      Monday/Maandag : <math>49 \times 2 = 98</math> miles/myl                      Tuesday/Dinsdag : 98 miles/myl                      Wednesday/Woensdag: 98 miles/myl                      Thursday/ Donderdag 98 miles/myl                      Totaal = 392 miles/myl ✓CA                       Fill up the tank on Thursday / <i>Maak die tenk vol petrol op Donderdag</i> </p> <table border="1" data-bbox="252 712 954 1115"> <tr> <td data-bbox="260 723 603 1104">                     Used per day /<i>Gebruik per dag</i>                      ✓ MA ✓ CA  <math>= 98 \div 18 = 5,44</math> gallons                       Petrol left in tank/<i>Petrol oor in tenk</i>  <math>= 23 - 5,44</math> ✓ MA                      ✓ CA  <math>= 17,56</math> gallons                 </td> <td data-bbox="611 723 946 1104">                     Miles that can be travelled after Friday/<i>Myle wat nog gereis kan word na Vrydag</i>  <math>= 414 - 98</math>  <math>= 316</math> miles/myl                      Petrol left in tank/<i>Petrol oor in tenk</i> <math>= 316 \div 18</math>  <math>= 17,56</math> gallons                 </td> </tr> </table>	Used per day / <i>Gebruik per dag</i> ✓ MA ✓ CA $= 98 \div 18 = 5,44$ gallons  Petrol left in tank/ <i>Petrol oor in tenk</i> $= 23 - 5,44$ ✓ MA ✓ CA $= 17,56$ gallons	Miles that can be travelled after Friday/ <i>Myle wat nog gereis kan word na Vrydag</i> $= 414 - 98$ $= 316$ miles/myl Petrol left in tank/ <i>Petrol oor in tenk</i> $= 316 \div 18$ $= 17,56$ gallons	<p>                     1A travel distance                       1RT trip distance                      1MA multiplying                       1CA number of trips                       1MA dividing                      1CA simplification                       1MA subtracting                       1CA simplification                       (8)                 </p>	
Used per day / <i>Gebruik per dag</i> ✓ MA ✓ CA $= 98 \div 18 = 5,44$ gallons  Petrol left in tank/ <i>Petrol oor in tenk</i> $= 23 - 5,44$ ✓ MA ✓ CA $= 17,56$ gallons	Miles that can be travelled after Friday/ <i>Myle wat nog gereis kan word na Vrydag</i> $= 414 - 98$ $= 316$ miles/myl Petrol left in tank/ <i>Petrol oor in tenk</i> $= 316 \div 18$ $= 17,56$ gallons				
5.2	<p> <math>{}^{\circ}\text{C} = \frac{5}{9}({}^{\circ}\text{F} - 32)</math>  <math>-7 = \frac{5}{9}({}^{\circ}\text{F} - 32)</math> ✓ SF   <math>{}^{\circ}\text{F} = \frac{9}{5} \times -7 + 32</math> ✓ S  <math>= 19,4</math> ✓ CA  <math>\approx 20^{\circ}\text{F}</math> ✓ R                 </p> <table border="1" data-bbox="638 1400 949 1608"> <tr> <td> <b>Or/of</b>  <math>{}^{\circ}\text{F} = -7 \div \frac{5}{9} + 32</math>  <math>= 19,4^{\circ}\text{C}</math>  <math>\approx 20^{\circ}\text{C}</math> </td> </tr> </table>	<b>Or/of</b> ${}^{\circ}\text{F} = -7 \div \frac{5}{9} + 32$ $= 19,4^{\circ}\text{C}$ $\approx 20^{\circ}\text{C}$	<p>                     1SF substitution                       1S simplification                      1CA simplification                       1R rounding                       (4)                 </p>	M L2	
<b>Or/of</b> ${}^{\circ}\text{F} = -7 \div \frac{5}{9} + 32$ $= 19,4^{\circ}\text{C}$ $\approx 20^{\circ}\text{C}$					
		[29]			
<b>TOTAL/TOTAAL: 150</b>					