



education

Department:
Education
PROVINCE OF KWAZULU-NATAL

**NATIONAL
SENIOR CERTIFICATE**

GRADE 12

MATHEMATICAL LITERACY P1

PREPARATORY EXAMINATION

SEPTEMBER 2020

MARKS: 150

TIME: 3 hours

**This question paper consists of 10 pages, 2 Answer Sheets
and an Addendum with 2 annexures (3 pages).**

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 4.1.1 – 4.1.7
 - ANNEXURE B for QUESTION 5.1.1 and 5.1.2
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 necessarily drawn to scale, unless stated otherwise.
10. Write neatly and legibly.

QUESTION 1

1.1

Sam and Zipho provide garden services. Sam charges R1,30 per m^2 to cut lawn and Zipho charges a call out fee of R300,00 plus R0,89 per m^2 . Ms Luvuno wants to hire garden service providers to cut the lawn. The area of the yard is 671 m^2 .

Use the information above to answer the following questions.

1.1.1 Calculate the total cost charged by Sam if he cuts lawn on Ms Luvuno's yard. (2)

1.1.2 Calculate the total cost charged by Zipho if he cuts the lawn in Ms Luvuno's yard. (3)

1.1.3 Which garden service provider is cheaper? (2)

1.1.4 Sam's lawn mower consumes five litres of petrol to cut the whole yard. Calculate the petrol cost if one litre costs R15,98. (2)

1.1.5 Zipho went to a restaurant and enjoyed some food, the bill was R389,00. He gave the waitress 12% of the bill amount as a tip. Calculate the amount of the tip. (2)

1.2

James and friends ran a 21,1 km race. James took 145 minutes to finish the race.

1.2.1 Convert 145 minutes to hours and minutes. (3)

1.2.2 Determine the run rate in km/minute. (2)

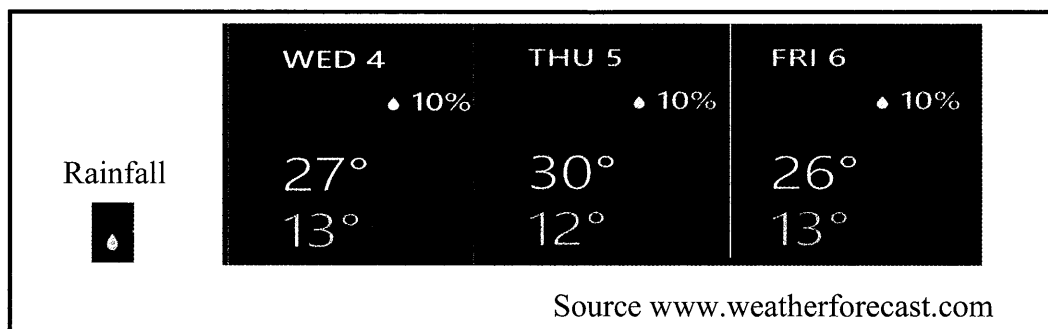
1.3

A Mathematical Literacy educator projects a map with the scale 1:50 000.

1.3.1 Explain what the scale on the projected map means. (2)

1.3.2 Determine the actual distance in km if the measurement on the map is 4 cm. (3)

1.4 The photo below shows the weather prediction for Johannesburg on 4, 5 and 6 March 2020.



1.4.1 Give the percentage chance of rain on 5 March 2020. (2)

1.4.2 Which day shows the lowest minimum temperature? (2)

1.5

Gift kept a record of customers who rented cars and those who purchased cars in the last six months of 2019. TABLE 1 below shows the number of people who rented or purchased cars.

Use TABLE 1 and the information above to answer the questions that follow.

TABLE 1: Showing number of customers who rented or purchased cars in the last six months of 2019

| Months | July | August | September | October | November | December |
|------------------|------|--------|-----------|---------|----------|----------|
| Renting a car | 6 | 5 | 8 | 5 | 5 | 15 |
| Purchasing a car | 7 | 6 | 5 | 5 | 7 | 16 |

1.5.1 In which month(s) was the purchasing of cars less than renting? (2)

1.5.2 Calculate the total number of customers who rented cars in the last six months. (2)

1.5.3 Name the best business month of Gift's company. (2)

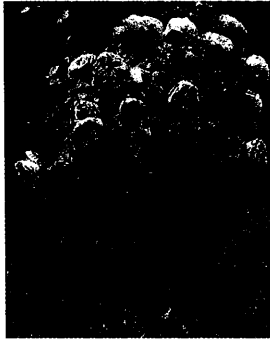
[31]

QUESTION 2

2.1

Agricultural Sciences students at Roseville College plant of rose trees with the aim of selling bunches of roses. The formula they use to determine the cost price is:

Cost price = R12,00 + R50,00 × number of bunches of roses. One bunch of roses is sold at R80,00 each.

Photo of a rose tree**Photo of a bunch of roses**

Use the information above to answer the questions that follow.

2.1.1 Calculate the cost price of 23 bunches of roses. (2)

2.1.2 Agricultural Science students paid a total cost price of R812,00 for bunches of roses. Calculate the number of bunches of roses bought. (3)

2.2

The price of the plant soil is made up of the fixed cost of R37,00 plus R6,00 per kilogram.

2.2.1 Write the formula to calculate the cost of the plant soil in the form:

Cost = (3)

2.2.2 Show by calculations whether 75 kg of plant soil will cost more than R500,00. (3)

2.2.3 Write the formula for calculating the income in the form:

Income = ... (2)

2.3

The students plan to plant fruit trees. TABLE 2 below shows the number of students needed to complete the planting of fruit trees.

TABLE 2: Showing number of students and number of days needed to plant fruit trees.

| | | | | | | | |
|--------------------|----|----|----------|---|----------|----|----|
| Number of students | 1 | 2 | 3 | 6 | A | 18 | 36 |
| Number of days | 36 | 18 | B | 6 | 4 | 2 | 1 |

Use the information above and TABLE 2 to answer the questions that follow.

- 2.3.1 Determine the constant product in TABLE 2 above. (2)
- 2.3.2 Calculate the missing values **A** and **B**. (4)
- 2.3.3 Use the values in TABLE 2 above to draw a graph on the attached Answer Sheet. (6)
- 2.3.4 What type of relationship is represented by the graph in 2.3.3 above?
Give a reason for your answer. (3)
- 2.3.5 Which variable is dependent? (2)
- 2.3.6 Write the ratio of students to the number of days in simplest form if there are 2 students. (3)

2.4

Civil Technology students manufacture cement plant pots using 1 070 kWh of electricity during May 2019. TABLE 3 below shows tariffs applicable to businesses and organisations using more than 1 000 units per month.

TABLE 3: Showing tariffs applicable to businesses and organisations using more than 1 000 units per month.

| | |
|--|--------|
| Commercial – small power (> 1 000 kWh average per month) | |
| Service charge (rand per day excluding 15% VAT) | R18,52 |
| Energy charge (c/kWh excluding 15% VAT) | 105,09 |

Source: www.umvoti.municipality.gov.za

Use the information above and TABLE 3 to answer the following questions.

- 2.4.1 Calculate the service charge (in Rands) including VAT for the month of May (31 days) 2019. (4)
- 2.4.2 Calculate the electricity cost (in Rands) including VAT for the month of May 2019. (3)
- 2.4.3 Determine the total cost (in Rands) for electricity usage for the month of May 2019. (2)

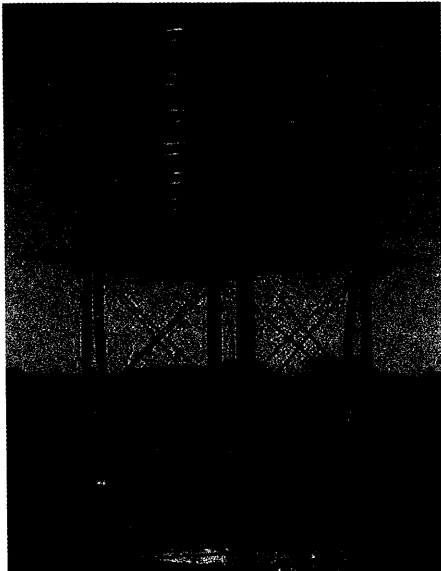
[42]

QUESTION 3

3.1

Roseville College erects a Jojo water tank on a stand in order to save water for Agricultural Science students. The photo of a Jojo water tank and prices of stands are

PHOTO OF A JOJO WATER TANK



The dimensions of the water tank are:

Diameter = 2 230 mm

Height = 3 130 mm

ALL PRICES OF STANDS EXCLUDE 15% VAT

| Height | Primed | Galvanised |
|--------|-----------|------------|
| 1,5 m | R7 800,00 | R8 900,00 |
| 3,0 m | R8 300,00 | R9 700,00 |
| 4,5 m | R9 500,00 | R12 500,00 |

Source: www.rainharvest.co.za

- 3.1.1 Determine the radius in metres. (3)
- 3.1.2 Calculate the volume of the tank in kilolitres (to the nearest kilolitre). Show all calculations.
You may use the following formula:
Volume of a cylinder = $\pi \times \text{radius}^2 \times \text{height}$ use $\pi = 3,142$
NOTE: $1\text{m}^3 = 1 \text{kl}$ (5)
- 3.1.3 The side length of the square platform is 5% more than the diameter of the water tank. Calculate the area in m^2 of the square platform on which the tank stands. (5)
- 3.1.4 The College will buy a galvanized stand with a height of 4,5 m. Calculate the VAT inclusive price of the stand. (2)
- 3.1.5 Calculate the common difference in heights of the three stands. (2)
- 3.1.6 Water is pumped at a rate of 1 kilolitre per 5 minutes into the tank. How long will it take in hours to fill the tank with capacity of 2 500 kilolitres? (3)

3.2

The gate at the College has the following dimensions: height = 2,08 m and length = 3,5 m.

- 3.2.1 Calculate the perimeter of the gate. (2)
- 3.2.2 Calculate the area occupied by the gate. You may use the following formula:

Area = length \times height (3)

[25]

QUESTION 4

Jane and Tom are the newly-weds. They plan to build a house using the floorplan and elevations shown in ANNEXURE A in the addendum.

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

- 4.1 How many bedrooms are shown on the floorplan? (2)
- 4.2 The elevations are numbered from 1 to 4. Match the elevation with the correct number e.g. West elevation 3.
- (a) North elevation
 - (b) South elevation
 - (c) West elevation
 - (d) East elevation
- 4.3 Is this plan for a single or double storey house? (2)
- 4.4 The actual length of the northern wall is 20 metres. Calculate the length on the floorplan. (3)
- 4.5 How many doors are found on the first floor? (2)
- 4.6 Give the compass direction of the kitchen from the garage. (2)
- 4.7 Which symbol represents a door on the floorplan? (2)

[17]

QUESTION 5

5.1

Jane and Tom have two girls, Rose who is 2 years old and Joy who is 8 months old. The growth chart for girls is shown in ANNEXURE B in the addendum.

Use the information above and ANNEXURE B to answer the following questions:

5.1.1 Rose's weight at birth is on the 75th percentile curve.

- (a) Give the other name of the 75th percentile curve. (2)
- (b) Determine Rose's weight (in kg) at birth. (2)
- (c) Rose's weight is on the 75th percentile curve. Explain what this means. (3)
- (d) If there are 35 000 two year old girls in South Africa, how many girls are heavier than Rose? (2)

5.1.2 Joy's age-for-height relationship lies on the 90th percentile curve. Determine her length in cm. (2)

5.2

Jane analyses the NSC final examination marks for Mathematical Literacy at school in 2019. To pass one must achieve level 2 upwards. 10 learners achieved level 1 and 142 achieved level 2 upwards. She organises levels according to TABLE 4 below.

Use the information above and TABLE 4 below to answer the following questions.

TABLE 4: Showing number of learners and levels achieved.

| Levels achieved | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|--------------------|----|----|----|----|----|---|---|
| Number of learners | 10 | 61 | 35 | 25 | 11 | 8 | 2 |

- 5.2.1 Calculate the total number of learners who wrote the Mathematical Literacy final examination. (2)
- 5.2.2 Calculate the pass percentage of Jane's learners. (2)
- 5.2.3 Is the data shown on the table discrete or continuous? (2)
- 5.2.4 Identify the level that was achieved by most learners. (2)
- 5.2.5 Which graph can best represent the data in the table between the bar graph and the histogram? (2)

5.2.6 Copy and complete the frequency table below.

FREQUENCY TABLE

| LEVEL | TALLY | FREQUENCY |
|--------------|-------------------------------------|-----------|
| 1 | | 10 |
| 2 | 1 | 61 |
| 3 | A | 35 |
| 4 | B | 25 |
| 5 | C | E |
| 6 | 111 | F |
| 7 | D | 2 |
| TOTAL | | 152 |

(6)

5.2.7 Use the values in the table to draw a bar graph on the attached Answer Sheet 2. (5)

5.2.8 Determine the probability (as a decimal) of randomly choosing a learner who achieved level 2. (3)

[35]

TOTAL MARKS: 150

ANSWER SHEET 1

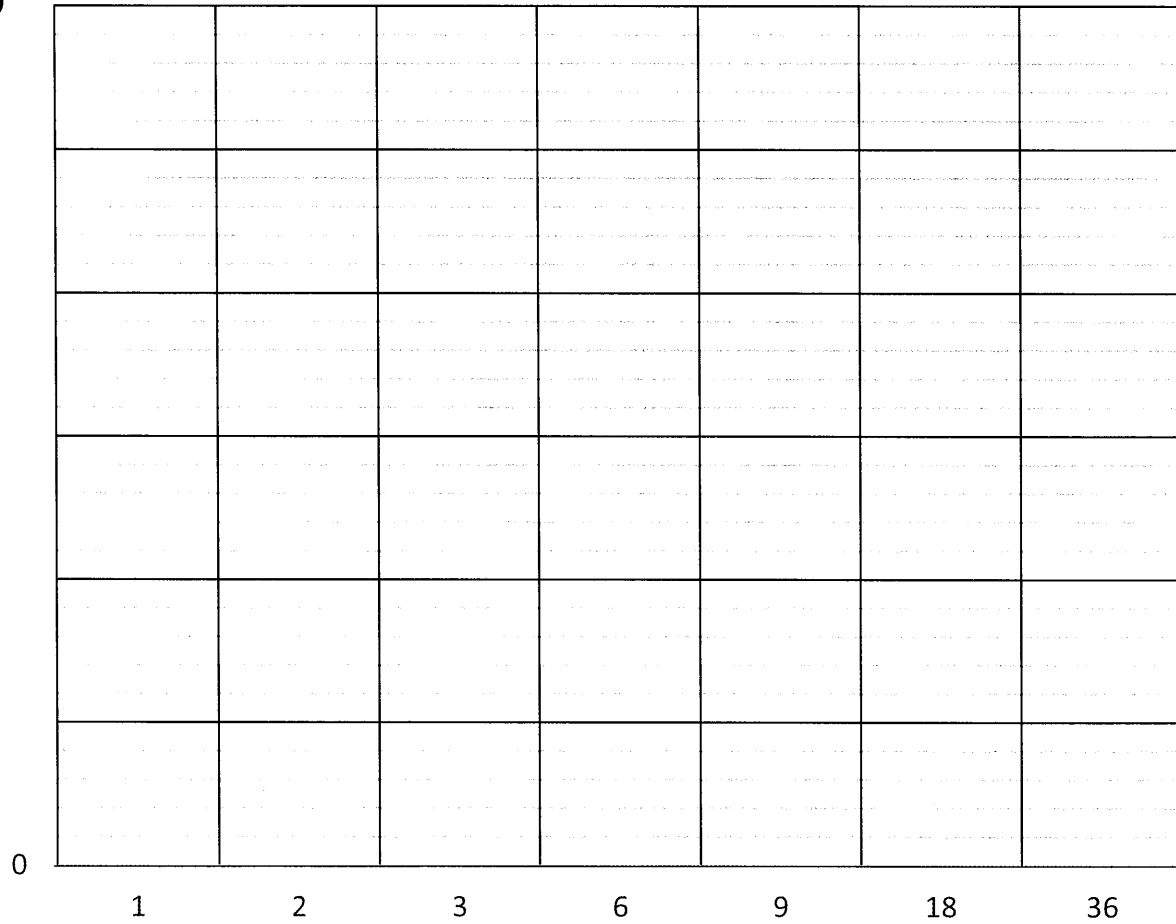
NAME: _____

CLASS: _____

QUESTION 2.3.3

Graph showing number of students and number of days taken to plant fruit trees

60

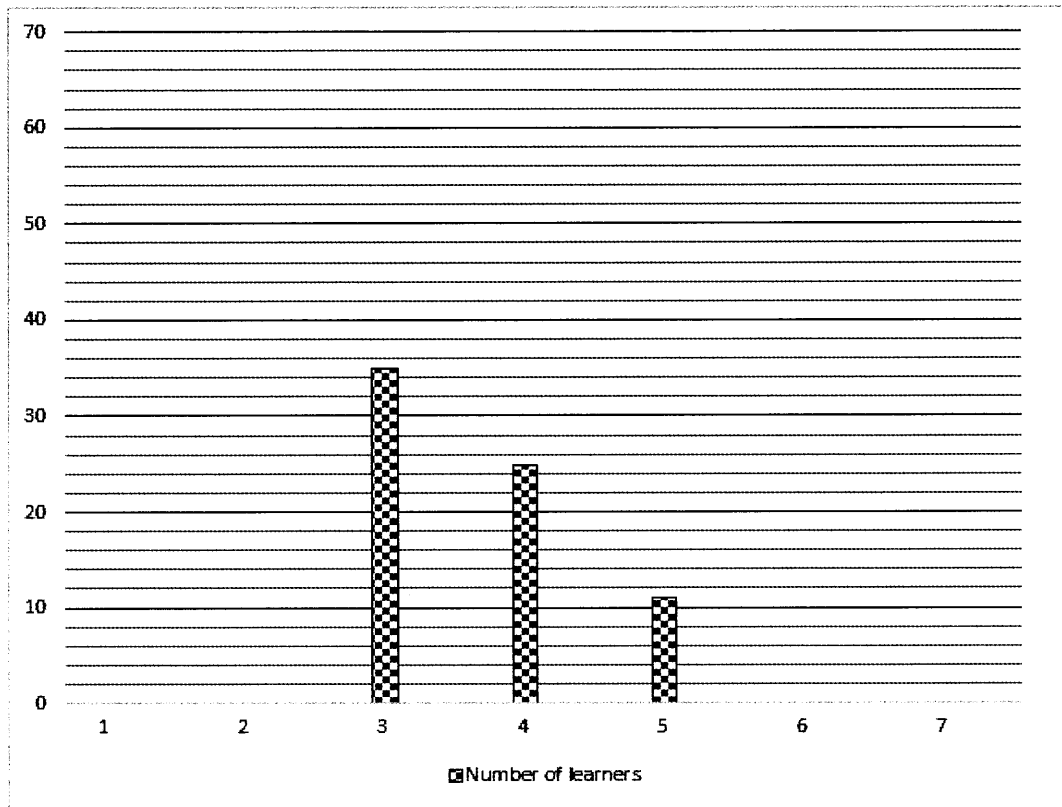


ANSWER SHEET 2

NAME: _____

CLASS: _____

QUESTION 5.2.7





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MATHEMATICAL LITERACY P1

ADDENDUM

PREPARATORY EXAMINATION

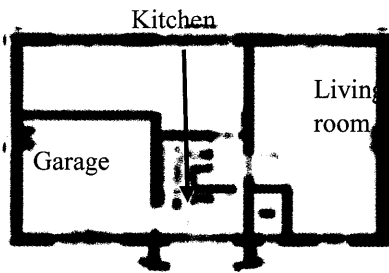
SEPTEMBER 2020

This addendum consists of 3 pages with 2 Annexures.

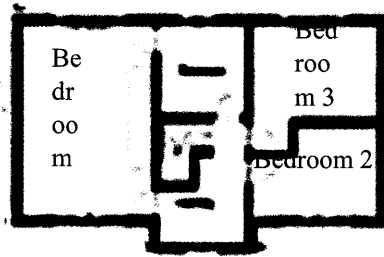
ANNEXURE A

QUESTIONS 4.1.1, 4.1.2, 4.1.3, 4.1.4, 4.1.5, 4.1.6 and 4.1.7

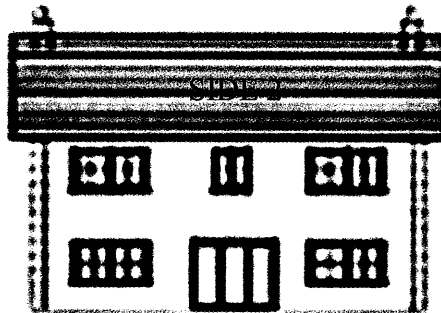
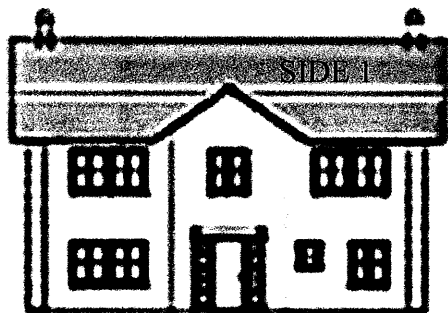
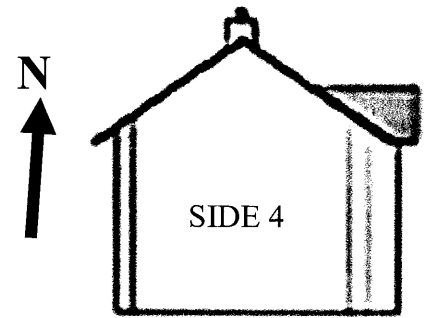
FLOORPLAN WITH ELEVATIONS



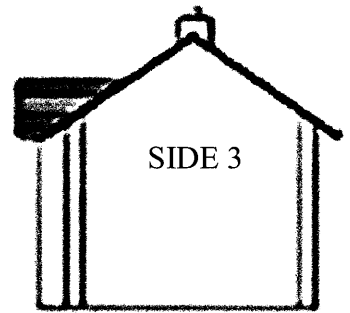
GROUND FLOOR PLAN



FIRST FLOOR PLAN



1: 250

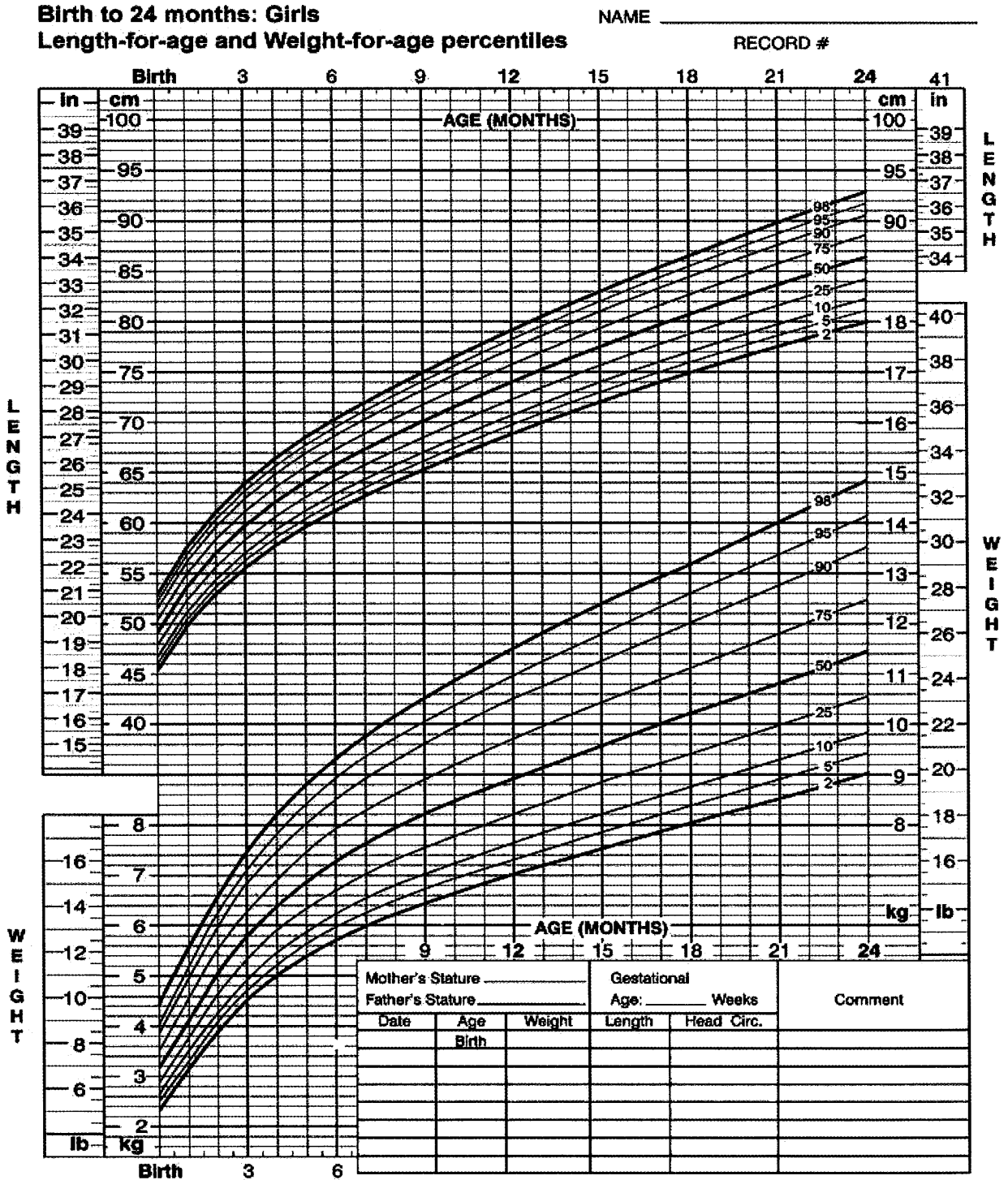


Source: www.floorplans.com

ANNEXURE B

QUESTION 5.1.1 and 5.1.2

GROWTH CHART FOR GIRLS



Source: www.growthcharts.com



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MATHEMATICAL LITERACY P1

MARKING GUIDELINE

PREPARATORY EXAMINATION

SEPTEMBER 2020

MARKS: 150

| SYMBOL | EXPLANATION |
|---------------|---|
| M | Method |
| MA | Method with accuracy |
| CA | Consistent accuracy |
| A | Accuracy |
| C | Conversion |
| S | Simplification |
| RT/RG/RD/RM | Reading from a table/ graph/ diagram/map |
| SF | Correct substitution in a formula |
| O | Opinion/ reason/deduction/example/Explanation |
| J | Justification |
| R | Rounding off |
| F | deriving a formula |
| AO | Answer only full marks |
| P | Penalty e.g. for units, incorrect rounding off etc. |
| NPR | No penalty for rounding / units |
| | |

This marking guideline consists of 11 pages.

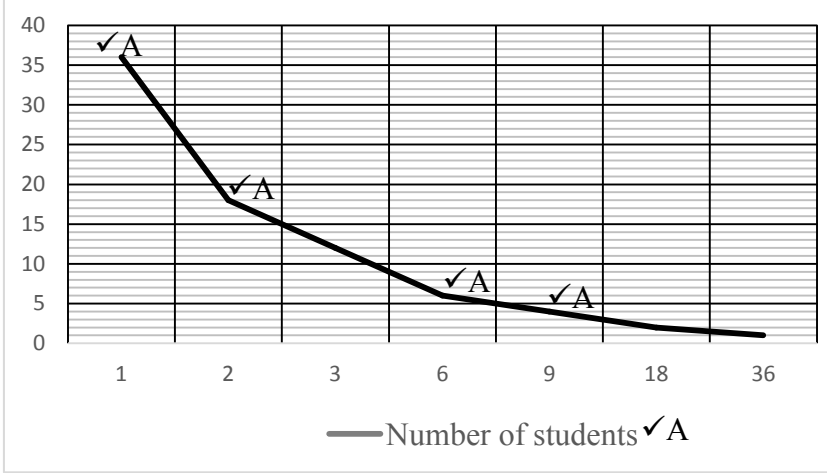
| QUESTION 1 [31 MARKS] | | | |
|-----------------------|--|---|----------|
| Ques | Solution | Explanation | T & L |
| 1.1.1 | Amount = R1,30 × 671 m ² ✓MA = R872,30 ✓A | 1MA multiplying 1A amount AO (2) | F L1 |
| 1.1.2 | Amount = R300,00 + (R0,89 × 671 m ²) ✓MA = R300,00 + R597,19 ✓S = R897,19 ✓A | 1MA addition 1S simplification 1A amount (3) | F L1 |
| 1.1.3 | Sam's garden services ✓✓O | 2O choice (2) | F L1 |
| 1.1.4 | Petrol cost = R15,98 × 5 litres ✓MA = R79,90 ✓A | 1MA multiplying by 5 1A amount AO (2) | F L1 |
| 1.1.5 | Tip = 12% × R389,00 ✓MA = R46,68 ✓A | 1MA multiplication 1A amount AO (2) | F L1 |
| 1.2.1 | 145 minutes ÷ 60 minutes ✓MA 2 hours (0,416666667 × 60) ✓C 2 hours 25 minutes ✓CA | 1MA dividing by 60 1C Conversion 1CA hours and minutes AO (3) | M L1 |
| 1.2.2 | Run rate = $\frac{21,1\text{km}}{145 \text{ minutes}}$ ✓MA = 0.1455172414km/min ✓A | 1MA dividing by 145 mins 1A rate NPR (2) | M L1 |
| 1.3.1 | 1: 50 000 means one unit on paper represents fifty thousand units in real life. ✓✓E | 2E explanation (2) | MP L1 |
| 1.3.2 | Actual distance 1 : 50 000 4 cm : cm = $\frac{50000 \times 4 \text{ cm}}{100000}$ ✓MA ✓C = 2 km ✓CA | 1MA multiplying by 4 1C Conversion 1CA actual distance (3) | MP L1 |



| | | | |
|-------|---|--|----------|
| 1.4.1 | 10% ✓✓A | 2A correct percentage (2) | P L1 |
| 1.4.2 | Thursday ✓✓A OR 5 March 2020 ✓✓A | 2A correct day No penalty for omitting the year (2) | P L1 |
| 1.5.1 | September ✓✓A | 2A correct month (2) | DH L1 |
| 1.5.2 | Number of customers = $6 + 5 + 8 + 5 + 5 + 15$ ✓1M $= 44$ ✓A | 1M adding correct values 1A number AO (2) | DH L1 |
| 1.5.3 | December ✓✓A | 2A correct month (2) | DH L1 |
| | | [31] | |



| QUESTION 2 [42 MARKS] | | | |
|------------------------------|---|--|----------------|
| Ques | Solution | Explanation | T&L |
| 2.1.1 | Total cost price = R12,00 + (R50,00 × 23) ✓SF = R1 162,00 ✓A | 1SF correct substitution 1A cost price AO (2) | F L1 |
| 2.1.2 | Number of bunches bought = R812,00 – R12,00 ✓MA = R800,00 ÷ R50,00 ✓M = 16 ✓CA | 1MA subtracting R12,00 1M dividing by R50,00 1CA no. of bunches (3) | F L1 |
| 2.2.1 | Cost = R37,00 + (R6,00 × number of kilograms) ✓MA ✓A ✓A | 1A fixed charge 1A for R6,00 1MA multiplying by no of kilograms (3) | F L2 |
| 2.2.2 | Cost = R37,00 + (R6,00 × 75 kg) ✓SF = R487,00 ✓CA It will cost less than R500,00 ✓C | CA from 2.2.1 1SF correct substitution 1CA cost 1C conclusion (3) | F L2 |
| 2.2.3 | Income = R80,00 × number of bunches of roses sold MA ✓ ✓A | 1A for R80,00 1MA multiplying by no of bunches of roses (2) | F L2 |
| 2.3.1 | Constant product = 36 ✓✓A | 2A product (2) | F L1 |
| 2.3.2 | A = 36 ÷ 4 ✓M = 9 ✓A B = 36 ÷ 3 ✓M = 12 ✓A | 1M dividing by 4 1A value 1M dividing by 3 1A value AO (4) | F L1 |

| | | | |
|-------------------------|--|---|----------------------------|
| <p>2.3.3</p> <p>✓ A</p> | <p>Graph showing number of students and number of days taken to plant fruit trees</p>  <p>Number of days</p> <p>Number of students ✓ A</p> | <p>1A graph starting at 1:36 2A two correct points 1CA joining points 1A for labelling vertical axis 1A for labelling horizontal axis</p> | <p>F L2</p> <p>(6)</p> |
|-------------------------|--|---|----------------------------|

| | | | |
|--------------|---|--|-----------------|
| <p>2.3.4</p> | <p>Inverse proportion/ Indirect proportion ✓ C</p> <p>If one value increases the other one decreases ✓✓ E</p> <p>OR</p> <p>As the number of students increases the number of days decreases ✓✓ E</p> | <p>1C choice 2E explanation</p> <p>(3)</p> | <p>F L1</p> |
| <p>2.3.5</p> | <p>Number of days ✓✓ A</p> | <p>2A correct answer (2)</p> | <p>F L1</p> |
| <p>2.3.6</p> | <p>Ratio 2 : 18 ✓✓ A 1 : 9 ✓ S</p> | <p>1A identifying both correct values 1A correct order 1S simplification (3)</p> | <p>F L1</p> |

| | | | |
|-------------|--|--|---------|
| 2.4.1 | <p>Service charge including VAT = $R18,52 \times 1,15$ ✓M = R21,30 ✓A Service charge per month = $R21,30 \times 31$ days ✓M = R660,30 ✓CA</p> <p style="text-align: center;">OR</p> <p>VAT = $\frac{15}{100} \times R18,52$ = R2,78 ✓A Service charge including VAT = $R18,52 + R2,78$ = R21,30 ✓A Service charge per month = $R21,30 \times 31$ days ✓M = R660,30 ✓CA</p> | <p>1M multiplying by 1,15 1A service charge 1M multiplying by 31 1CA charge per month Accept R660,24</p> <p style="text-align: center;">OR</p> <p>1A VAT amount 1A service charge 1M multiplying by 31 1CA charge per month Accept R660,24 (4)</p> | F L2 |
| 2.4.2 | <p>Electricity cost = $1\,070 \text{ kWh} \times (105,09 \div 100)$ ✓C = $1\,070 \text{ kWh} \times R1,0509$ = $R1\,124,46 \times 1,15$ ✓M = R1 293,13 CA ✓</p> | <p>1C conversion 1M multiplying by 1,15 CA cost (3)</p> | F L1 |
| 2.4.3 | <p>Total cost = $R1\,293,13 + R660,30$ ✓M = R1 953,43 ✓CA</p> | <p>CA from 2.4.1 and 2.4.2 1M adding 1CA total cost AO (2) Accept R 1 953,37</p> | F L1 |
| [42] | | | |

| QUESTION 3 [25 MARKS] | | | |
|------------------------------|---|--|----------------|
| Ques | Solution | Explanation | T&L |
| 3.1.1 | $\text{Radius} = \frac{2230 \text{ mm}}{2} \checkmark \text{M}$ $= 1\,115 \text{ mm} \div 1\,000 \checkmark \text{C}$ $= 1,12 \text{ m} \checkmark \text{CA}$ <p style="text-align: center;">OR</p> $\text{Radius} = \frac{2230 \text{ mm}}{1000} \checkmark \text{C}$ $= \frac{2,23 \text{ m}}{2} \checkmark \text{M}$ $= 1,12 \text{ m} \checkmark \text{CA}$ | 1M dividing by 2 1C conversion 1CA radius <p style="text-align: center;">OR</p> 1C conversion 1M dividing by 2 1CA radius (3) | M L1 |
| 3.1.2 | $\text{Volume of a cylinder} = \pi \times \text{radius}^2 \times \text{height}$ $= 3,142 \times (1,12 \text{ m})^2 \times (3\,130 \text{ mm} \div 1\,000) \checkmark \text{C}$ $= 3,142 \times (1,12 \text{ m})^2 \times 3,13 \text{ m} \checkmark \text{SF}$ $= 12,33634662 \text{ m}^3 \checkmark \text{CA}$ $1 \text{ m}^3 = 1 \text{ kl}$ $= 12,33634662 \text{ m}^3 = 12,33634662 \text{ kl} \checkmark \text{CA}$ $\approx 12 \text{ kl} \checkmark \text{R}$ | CA from 3.1.1 1C conversion 1SF correct substitution 1CA volume 1CA number of kl 1R Rounding (5) | M L2 |
| 3.1.3 | $\text{Side length} = \text{Diameter} + (5\% \times 2\,230 \text{ mm} \div 1\,000) \checkmark \text{C}$ $= 2,23 \text{ m} + (5\% \times 2,23 \text{ m}) \checkmark \text{M}$ $= 2,3415 \text{ m} \checkmark \text{CA}$ $\text{Area of a square platform} = \text{side} \times \text{side}$ $= 2,3415 \text{ m} \times 2,3415 \text{ m} \checkmark \text{SF}$ $= 5,48262225 \text{ m}^2$ $= 5,48 \text{ m}^2 \checkmark \text{CA}$ | 1C conversion 1M adding 5% 1CA length 1SF correct substitution 1CA area NPR (5) | M L3 |
| 3.1.4 | $\text{VAT inclusive price} = \text{R}12\,500,00 \times 1,15 \checkmark \text{M}$ $= \text{R}14\,375,00 \checkmark \text{A}$ <p style="text-align: center;">OR</p> $\text{VAT inclusive price} = \text{R}12\,500,00 + (15\% \times \text{R}12\,500,00) \checkmark \text{M}$ $= \text{R}14\,375,00 \checkmark \text{A}$ | 1M multiplying by 1,15 1A price <p style="text-align: center;">OR</p> 1M adding 15% 1A price (2) | M L1 |

| | | | |
|-------|---|--|---------|
| 3.1.5 | Difference = $4,5 \text{ m} - 3,0 \text{ m}$ ✓M $= 1,5 \text{ m}$ ✓A <p style="text-align: center;">OR</p> Difference = $3,0 \text{ m} - 1,5 \text{ m}$ ✓M $= 1,5 \text{ m}$ ✓A | 1M subtraction 1A difference <p style="text-align: center;">OR</p> 1M subtraction 1A difference AO (2) | M L1 |
| 3.1.6 | 1 kl : 5 minutes 2 500 kl : minutes $\frac{2500 \times 5}{60} \checkmark M$ $= 208,3333333 \text{ hrs}$ ✓CA | 1M Multiplication 1C Conversion 1CA number of hours (3) | M L1 |
| 3.2.1 | Perimeter = $2,08 \text{ m} + 3,5 \text{ m} + 2,08 \text{ m} + 3,5 \text{ m}$ ✓M $= 11,16 \text{ m}$ ✓A <p style="text-align: center;">OR</p> Perimeter = $2(3,5 \text{ m} + 2,08 \text{ m})$ ✓M $= 11,16 \text{ m}$ ✓A | 1M adding 1A perimeter <p style="text-align: center;">OR</p> 1M adding 1A perimeter AO (2) | M L1 |
| 3.2.2 | Area = length \times height $= 3,5 \text{ m} \times 2,08 \text{ m}$ ✓SF $\checkmark A$ $= 7,28 \text{ m}^2$ ✓A | 1SF correct substitution 1A area 1A unit (3) | M L2 |
| | | [25] | |



| QUESTION 4 [17 MARKS] | | | |
|------------------------------|--|--|----------------|
| Ques | Solution | Explanation | T&L |
| 4.1 | 3 bedrooms ✓✓A | 2A correct number (2) | MP L1 |
| 4.2 | (a) North elevation – 2 ✓A (b) South Elevation – 1 ✓A (c) West Elevation – 4 ✓A (d) East elevation - 3 ✓A | 4A correct numbers (4) | MP L2 |
| 4.3 | Double storey ✓✓A | 2A correct choice (2) | MP L1 |
| 4.4 | length on the floorplan 1 : 250 1 cm : 250 cm 20 m × 100 ✓C = 2 000 cm length = $\frac{2000}{250}$ ✓M = 8 cm ✓CA OR length on the floorplan 1 : 250 1 mm : 250 mm 20 m × 1 000 ✓C = 20 000 mm length = $\frac{20\ 000}{250}$ ✓M = 80 mm ✓CA | 1C conversion 1M dividing by 250 1CA length OR 1C conversion 1M dividing by 250 1CA length (3) | MP L2 |
| 4.5 | 5 doors ✓✓A | 2A correct number (2) | MP L1 |
| 4.6 | East ✓A | 2A direction (2) | MP L1 |
| 4.7 | Quarter circle ✓✓A OR Drawing symbol of a quarter circle ✓✓A | 2E explanation Accept curved line (2) | MP L1 |
| | | [17] | |

| QUESTION 5 [35 MARKS] | | | |
|-----------------------|---|--|----------|
| Ques | Solution | Explanation | T&L |
| 5.1.1 (a) | Quartile 3 ✓✓A OR Upper quartile ✓✓A | 2A correct name (2) | DH L2 |
| (b) | 3,6 kg ✓✓A | 2A weight (2) | DH L2 |
| (c) | If one can take all the two year old girls, Rose will be heavier ✓E than 75% ✓E of the girls and 25% ✓E of the girls of the same age will be heavier than Rose. | 3E explanation (3) | DH L2 |
| (d) | Girls heavier than Rose = $25\% \times 35\,000$ ✓M = 8 750 ✓CA | 1M multiplication 1CA number (2) | DH L1 |
| 5.1.2 | 72 cm ✓✓A | 2A correct height (2) | DH L1 |
| 5.2.1 | Number of learners = $10 + 61 + 35 + 25 + 11 + 8 + 2$ ✓M = 152 ✓A | 1M adding 1A total number (2) | DH L1 |
| 5.2.2 | Pass percentage = $\frac{142}{152} \times 100\%$ ✓M = 93,4% ✓CA | CA from 5.2.1 1M percentage concept 1CA percentage (2) | DH L1 |
| 5.2.3 | Discrete ✓✓A | 2A correct choice (2) | DH L1 |
| 5.2.4 | Level 2 ✓✓A | 2A correct level (2) | DH L1 |
| 5.2.5 | Bar graph ✓✓A | 2A choice (2) | DH L1 |

| <p>5.2.6</p> | <p>FREQUENCY TABLE</p> <table border="1"> <thead> <tr> <th>LEVEL</th> <th>TALLY</th> <th>FREQUENCY</th> </tr> </thead> <tbody> <tr> <td>1</td> <td> </td> <td>10</td> </tr> <tr> <td>2</td> <td> 1</td> <td>61</td> </tr> <tr> <td>3</td> <td> ✓A</td> <td>35</td> </tr> <tr> <td>4</td> <td> ✓A</td> <td>25</td> </tr> <tr> <td>5</td> <td> 1 ✓A</td> <td>11 ✓A</td> </tr> <tr> <td>6</td> <td> </td> <td>8 ✓A</td> </tr> <tr> <td>7</td> <td> ✓A</td> <td>2</td> </tr> <tr> <td>TOTAL</td> <td></td> <td>152</td> </tr> </tbody> </table> | LEVEL | TALLY | FREQUENCY | 1 | | 10 | 2 | 1 | 61 | 3 | ✓A | 35 | 4 | ✓A | 25 | 5 | 1 ✓A | 11 ✓A | 6 | | 8 ✓A | 7 | ✓A | 2 | TOTAL | | 152 | <p>4 A tallies 2A frequency</p> <p>(6)</p> | <p>DH L2</p> |
|--------------------------------|---|---|--------------------|-----------|----|---|----|---|-------------------------------------|----|----|-------------|----|---|----|----|---|--|------------------|---|--|------|---|----|---|--------------|--|------------|--|------------------|
| LEVEL | TALLY | FREQUENCY | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | | 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | 1 | 61 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | ✓A | 35 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | ✓A | 25 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | 1 ✓A | 11 ✓A | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | | 8 ✓A | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | ✓A | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TOTAL | | 152 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>5.2.7</p> | <table border="1"> <caption>Levels achieved by learners ✓A</caption> <thead> <tr> <th>Level</th> <th>Number of learners</th> </tr> </thead> <tbody> <tr><td>1</td><td>10</td></tr> <tr><td>2</td><td>61</td></tr> <tr><td>3</td><td>35</td></tr> <tr><td>4</td><td>25</td></tr> <tr><td>5</td><td>11</td></tr> <tr><td>6</td><td>8</td></tr> <tr><td>7</td><td>2</td></tr> </tbody> </table> | Level | Number of learners | 1 | 10 | 2 | 61 | 3 | 35 | 4 | 25 | 5 | 11 | 6 | 8 | 7 | 2 | <p>4 A correct bar heights 1A heading</p> <p>(5)</p> | <p>DH L2</p> | | | | | | | | | | | |
| Level | Number of learners | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | 61 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | 35 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 25 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | 11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>5.2.8</p> | $P(\text{level 2}) = \frac{61}{152}$ $= 0,40$ | <p>1A numerator 1A denominator 1A decimal NPR</p> <p>(3)</p> | <p>P L2</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | <p>[35]</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>TOTAL MARKS: 150</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |