

# NORMAN HENSHILWOOD HIGH SCHOOL EXAMINATIONS



## Instructions

1. Answer questions neatly in ink.
2. Show all calculations.
3. Start each question on a new page.
4. All graphs to be completed in pencil.
5. Answers to be rounded off to two decimal places unless otherwise stated.

<b>DATE</b>	6 JUNE
<b>GRADE</b>	10
<b>SUBJECT</b>	MATHEMATICAL LITERACY
<b>TIME</b>	2 HOURS
<b>MARKS</b>	100
<b>EXAMINER</b>	E. DANIELS
<b>MODERATOR</b>	J. CROSSWELL

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Checked B.S. 2011

*on web*

**QUESTION 1**

- 1.1 Round off 7.1 to the nearest whole number. [1]
- 1.2 Round off 0,66 to one decimal place. [1]
- 1.3 Calculate  $0,003 + 3,21$  [1]
- 1.4 Write the following fractions as percentages:  
1.4.1  $\frac{3}{10}$  [2]  
1.4.2  $\frac{5}{8}$  [2]
- 1.5 On a map has a scale of 1:3 500 000. If a distance on a map is 2,4cm. How far is that in km? [3]
- 1.6 A restaurant buys coffee in bulk. The coffee comes in a cubic box that is 60cm x 60cm x 60cm  
1.6.1 What is the volume of the box? [2]  
1.6.2 The restaurant pours the coffee into smaller containers, each with a volume of 700cm<sup>3</sup>. How many jars can be filled from one cubic box? [2]

1.7

CURRENCY	EXCHANGE RATE (UNITS PER R1.00)
Australian Dollar (A\$)	0,1816
Botswana Pula (BWP)	0,8659
Mexican Peso (Mex\$)	1,5529
Namibian Dollar (N\$)	1,00
New Zealand Dollar (NZ\$)	0,20
Swaziland Lilangeni (L)	1,00
Swiss Franc (F)	0,1762

- 1.7.1 Which countries have the same exchange rate as South Africa? [2]
- 1.7.2 Explain how you reached your answer. [2]
- 1.8 You are told to choose a random number from 1 to 11. What is the probability that the number that you choose will be:-  
1.8.1 An even number [2]  
1.8.2 An odd number [2]  
1.8.3 A prime number [2]


[22]

**QUESTION 2**

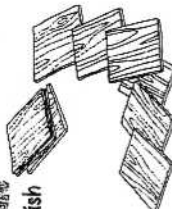
Paul is redoing the flooring in his room. The size of his room is: L = 4m  
B = 3m

He has 2 choices:

**Carpet**  
New stock now in various patterns. Special offer. Cannot be repeated. 3m wide. R80.00 per metre.



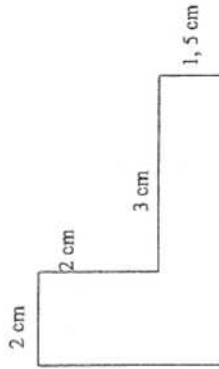
**Wood Plank for sale**  
With realistic wood finish give your home the stately home look. 10cm by 80 cm. R12.00 each.



- 2.1 What is the area of Paul's room? [2]
- 2.1.2 Study the advertisement above and, for each one, work out how much it would cost him to cover the floor in his room. (Note: work in metres) [12]
- 2.1.3 Which option did he choose for the shape shown in the diagram? [1]

2.2 For the shape shown in the diagram, find:

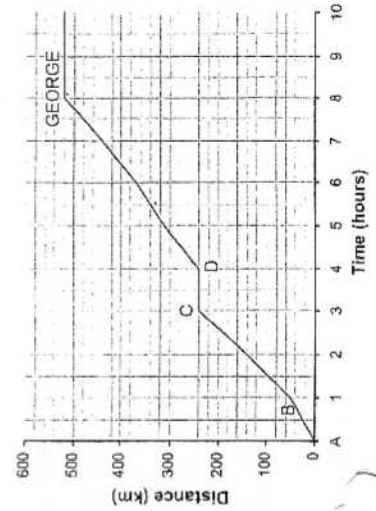
- 2.2.1 The perimeter [3]
- 2.2.2 The area [3]



[5]

**QUESTION 3**

3.1 A family goes to George on holiday. The graph given below describes their trip:



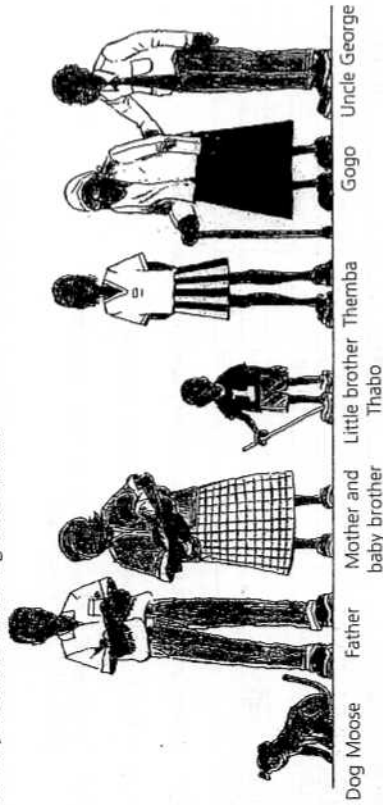
[23]

- 3.1 Describe what is happening between points A and B. [1]
- 3.2 Describe what is happening between points B and C. Use the graph to motivate your answer. [1]
- 3.3 During their journey they stop at an Engen One-Stop. Where is this shown on the graph and how is it shown? [2]
- 3.4 How long did they stop at the Engen? [1]
- 3.5 How far was the Engen from home? [1]
- 3.6 How long did it take them to reach their destination? [1]

[7]

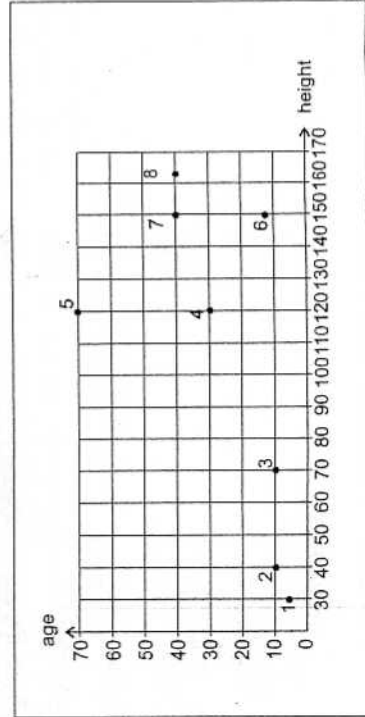
**QUESTION 4**

Look at the picture of Themba's family shown below. Themba has a baby brother, Tsepo who is 6 months old and a little brother, Thabo. Themba's grandmother and Uncle George also live with them. They also have a little dog called Moose.



Look at the graph below showing the relationship between the age and the height of the family members in the picture above. Number 1 shows the youngest family member, baby Tsepo, and number 2 shows the dog Moose.

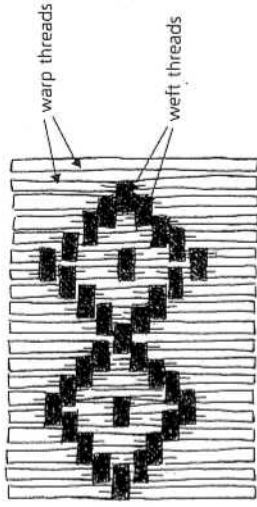
To whom do the other numbers correspond ?



[12]

**QUESTION 5**

Look at the woven pattern shown below:



The weft threads are woven in and out of the warp threads to form a pattern of diamonds. The weft threads looks like little rectangles.

- 5.1 How many rectangles make up one pattern? [1]
- 5.2 How many rectangles must be added to the first diamond pattern to make the second diamond pattern? [1]
- 5.3 How many 16's would you have to add to the first diamond pattern to give:
  - 5.3.1 27 diamond patterns [1]
  - 5.3.2 1 diamond patterns [2]

[5]

### QUESTION 6

Mrs. Ntuli pays a visit to the local supermarket and notes the following prices for some of the ingredients that she needs for making super delicious doughnuts.

INGREDIENT	QUANTITY	PRICE
Golden Cloud Cake Flour	2,5 kg	R 10,99
Snowflake Cake Flour	10 kg	R 42,99
Sasko Cake Flour	1 kg	R 5,69
Hulellets White Sugar	1 kg	R 5,69
Hulellets White Sugar	500 g	
Marina Household Salt	500 g	R 1,25
Rama Margarine	500 g	R 7,99
Big Cow Full Cream Milk (Sachet)	1 litre	R 3,95
Clover Full Cream Milk (Bottle)	500 ml	R 3,49
Parmalat Full Cream Milk (Bottle)	2 litres	R 8,99
Windmeul Large Eggs	6	R 4,39
Windmeul Large Eggs	30 (Tray)	R 21,45
All Gold Smooth Apricot Jam	450 g	R 5,95
Superior Chunky Apricot Jam	1 kg	R 15,99
Crown Blended Sunflower Oil	750 ml	R 5,29
Pan Sunflower Oil	2 litres	R 18,99

- 6.1.1 Determine the cost per kilogram of the *Golden Cloud Cake Flour*. [3]
- 6.1.2 Which brand of flour is the cheapest per kilogram? [3]
- 6.2.1 Which quantity of milk works out cheapest per litre? Show all of your calculations. [3]
- 6.2.2 Would it be cheaper to buy two 1 L sachets of milk or one 2 L bottle? [2]
- 6.2.3 Why do you think it is cheaper to buy milk in a sachet rather than in a bottle? [1]
- 6.3 Mention one disadvantage and one advantage of buying ingredients in bulk? [2]

[14]

### QUESTION 7

Students record the makes of cars passing the school, and summarize their observations in the following table:

MAKE OF CAR	FREQUENCY
VW	5
Ford	3
Mazda	4
Nissan	6
Opel	2
Total	8
	24

- 7.1.1 Work out the angle each make of car would form in a pi chart. [5]
- 7.1.2 Draw the pi chart to show these data. [4]
- 7.2 The table below contains information from the Molofope Police Department. It shows the number of people who took the tests and who passed the learner-drivers and drivers test over a one month period.

	LEARNER- DRIVERS TEST	DRIVERS TEST
Took the test	1047	794
Passed	674	418

- 7.2.1 What percentage of people who wrote the Learnr-Drivers test passed? Give your answer correct to two decimal places. [3]
- 7.2.2 What percentage of people who took the Driver's test failed? Give your answer to correct to two decimal places. [2]
- 7.2.3 If the Molofope Police Department predicts that there will be a total of approximately 12 500 candidates who will attempt the Driver's Test during the year, predict how many of these candidates will pass the driver's test and earn their Code-8 driver's licence. [3]

[17]