MLMS
MATHEMATICAL LITERACY
MATHEMATICS AND
MATHEMATICAL SCIENCES
ABET LEVEL 4
JUNE 2003

ABET LEVEL 4 SUMMATIVE ASSESSMENT

NQF LEVEL 1

DEPARTMENT OF EDUCATION

MATHEMATICAL LITERACY MATHEMATICS AND MATHEMATICAL SCIENCES

CODE: MLMS

JUNE 2003

TIME: 3 HOURS

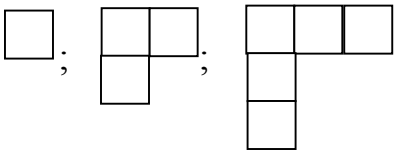
MARKS: 100

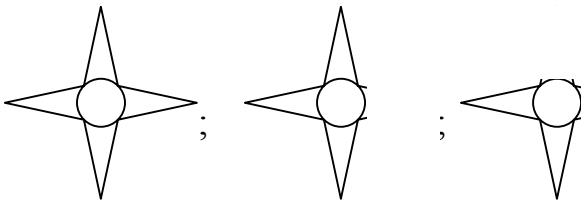
This question paper consists of 11 pages.

SECTION A : MATHEMATICAL LITERACY

QUESTION 1

1.1 Complete the following patterns and give the answer in the answer book..

1.1.1  (1)

1.1.2  (1)

1.1.3 2a ; 4a ; 6a ; ..... (1)

1.1.4 20 ; 15 ; 10 ; ..... (1)

1.1.5 1 ; 4 ; 9 ; ..... (1)

1.2.1 List ALL the factors of 30 that are even numbers. (2)

1.2.2 List ALL the factors of 30 that are odd numbers. (2)

1.2.3 List the first THREE multiples of 30. (1)

[10]

QUESTION 2

Below is a bank statement of Ms Tao. Study it carefully and answer the following questions:

DATE	TRANSACTION	AMOUNT
31/06/02	Gauteng Administration Salary	R3 600,00
01/07/02	Debit order - Old Mutual	R 330,00
01/07/02	Debit order - Edgars	R 220,00
01/07/02	Debit order - Russels	R 345,00
01/07/02	Debit order - Game	R 425,00
01/07/02	Petrol card - FNB	R 801,60
05/07/02	Withdrawal	R1 690,00
05/07/02	Bank charges	R 16,40
06/07/02	Available balance	-R 212,00

2.1 Where does Ms Tao work? (1)

2.2 Her balance on 06/07/02 is negative. What do you think is the reason? (2)

2.3 If she had cancelled her insurance with Old Mutual, what would her balance have been? (Bank charges remain the same.) (2)

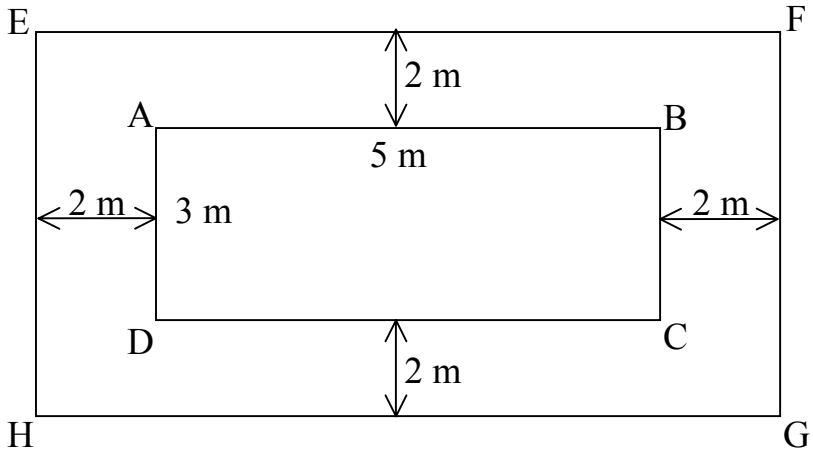
2.4 If Ms Tao spends R801,60 on transport every month, how much on average does she spend per week on transport? (Assuming that she travels almost the same number of kilometres per week.) (2)

2.5 What is the total amount of money deducted from her salary? (Bank charges are not included.) (2)

[9]

QUESTION 3

Zakes wants to lay a cement path (2 m broad) around a rectangular grass lawn (5 m long and 3 m broad) as indicated on the diagram below.



3.1 Calculate the area of the rectangular grass lawn ABCD. (2)

3.2 What is the length of the grass lawn plus the cement path (EF)? (1)

3.3 What is the breadth of the grass lawn plus the cement path (EH)? (1)

3.4 Calculate the area of the grass lawn plus the cement path (EFGH) (2)

3.5 Now calculate the area of the cement path. (2)

3.6 1 bag of cement is needed to cover 2 m^2 of the cement path. How many bags of cement will be used altogether to cover the cement path? (2)

3.7 If 1 bag of cement costs R21,90, how much money will be spent on cement to cover the path? (2)

[12]

QUESTION 4

The table below shows the marks obtained by 16 learners in an ABET Level 3 assessment.

264	462	273	384	396	295	672	372
442	356	301	488	519	595	631	570

4.1 What is the highest mark obtained? (1)

4.2 What is the lowest mark obtained? (1)

4.3 How many learners obtained more than 300 marks? (1)

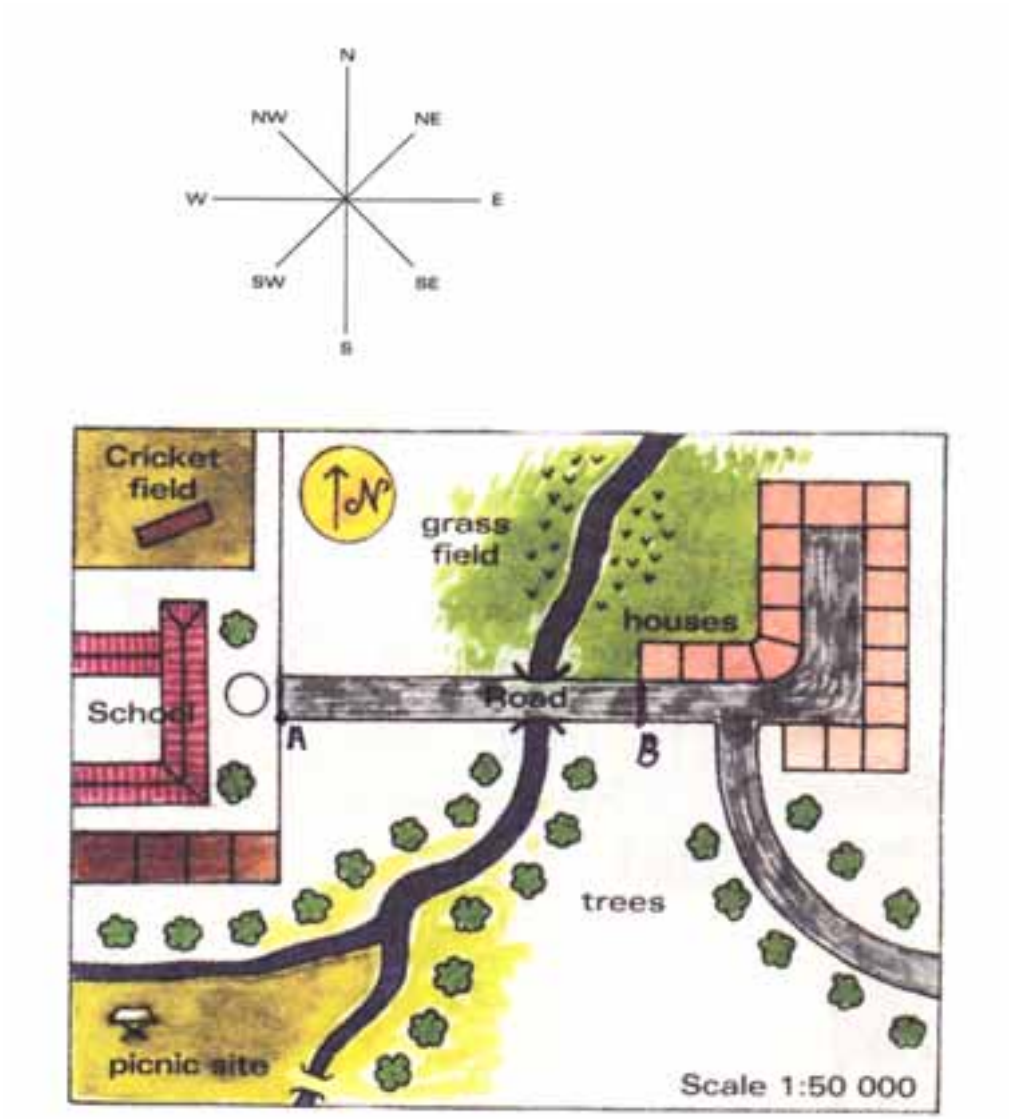
4.4 How many learners obtained between 250 and 350 marks? (1)

4.5 Calculate the average mark of the learners. (3)

[7]

QUESTION 5

5.1 Look at the map of a part of a certain town below and answer the questions that follow:



5.1.1 How many trees are shown on the map? (1)

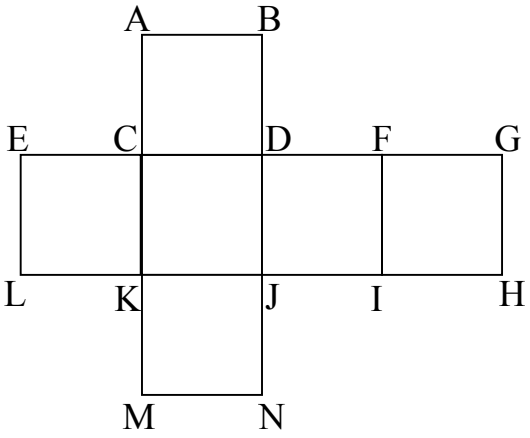
5.1.2 If these trees multiply by 2 every year, how many trees will there be present in 5 years time in this part of the town? (2)

5.1.3 Khotso is driving from the houses to the school. In which direction will she be driving? (1)

5.1.4 What is the distance in cm from the school (point A) to the nearest house (point B)? (2)

5.1.5 Use the scale to calculate the actual (real) distance between the school (point A) and the nearest house (point B). Write your answer in kilometres (km). (4)

5.2



When the net above is folded to form a cube, which point will meet (full) with B? (2)

[12]

TOTAL SECTION A: 50

SECTION B: MATHEMATICS AND MATHEMATICAL SCIENCES

QUESTION 6

The table below shows the relationship between the number of men building a house and the number of days needed to build the house.

Days to build house	200	80	50	40	8	5	b
Number of men	a	5	8	10	50	80	100

6.1 Complete the sentence by choosing the correct word in brackets.
"It is clear from the table that the more men building the house, the (more/less/the same) days are needed." (1)

6.2 Complete the table by calculating the values of a and b. (4)

6.3 When plotting the points in the above table on a graph it would not make sense to join the points in a continuous curve. Explain this. (2)
[7]

QUESTION 7

Simplify:

7.1 $a(a + b)$ (2)

7.2 $(3m - n)(m - n)$ (3)

7.3 $\frac{3m}{2} + \frac{2m}{3}$ (3)
[8]

QUESTION 8

8.1 Solve for x:

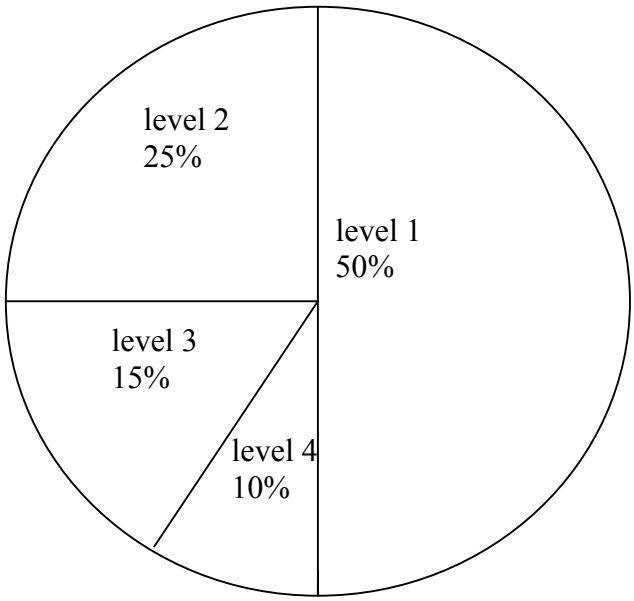
8.1.1 $(3x + 2)(x - 3) = 0$ (3)

8.1.2 $(3x - 3) \leq 7$ and show the solution on a number line. (4)

8.2 Let x be a number. Add 1 to this number, multiply the answer by 3 and subtract 2 to get 67 as the final answer. What is the value of x? (5)
[12]

QUESTION 9

The pie-chart below shows the percentages (%) of ABET learners from levels 1 - 4 in a certain adult centre.



The total number of learners at the centre is 400.

9.1 How many learners are there in Level 1? (2)

9.2 How many learners are there in Level 2? (1)

9.3 How many learners are there altogether in Levels 3 and 4? (2)

9.4 Write 10% as:

9.4.1 A common fraction (1)

9.4.2 A decimal fraction (1)

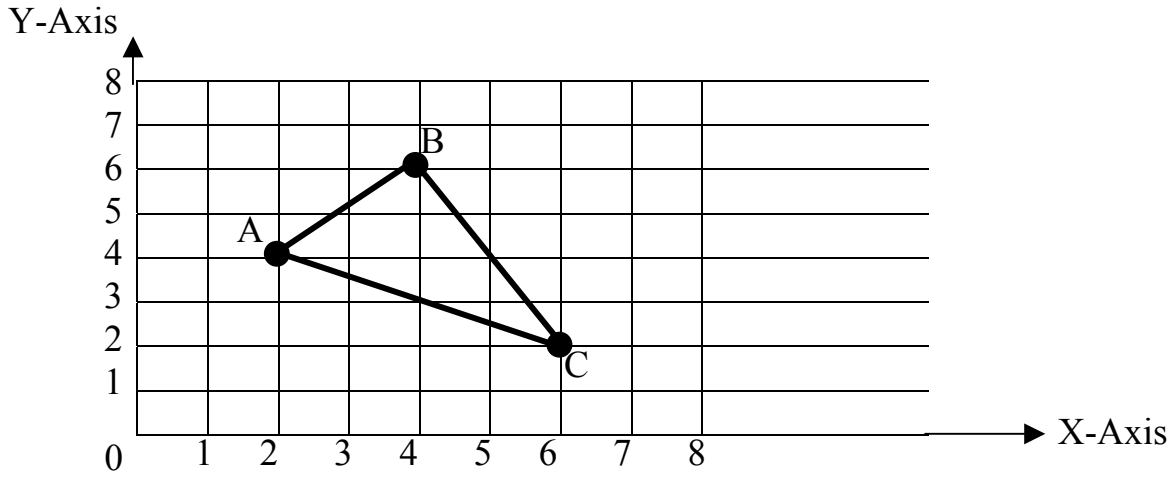
9.5 Calculate the size of the angle that was used to draw the segment to indicate the percentage of Level 3 learners i.e. to indicate the 15% of the total number of learners. (3)

9.6 Draw a bar graph to illustrate the number of learners (not percentages) in each level.
(Use the following scale on the vertical axis : 1 cm = 20 learners. (4)

[14]

QUESTION 10

10.1 Study the sketch on the cartesian plane below and then answer the questions that follow.

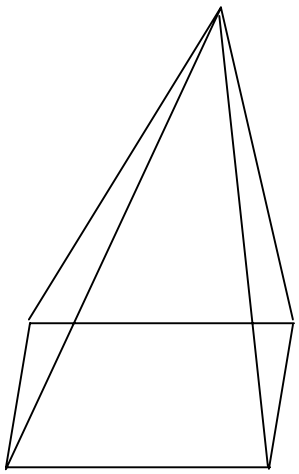


10.1.1 The co-ordinates of point A are (2;4). What are the co-ordinates of point B? (2)

10.1.2 Complete the sentence by choosing the correct word from those in brackets:
ABC is a (one-dimensional/two-dimensional/three-dimensional) figure. (1)

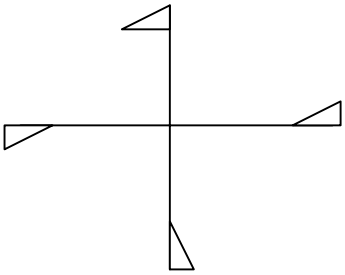
10.1.3 If point A is moved one unit vertically upwards what will the new co-ordinates of point A be? (2)

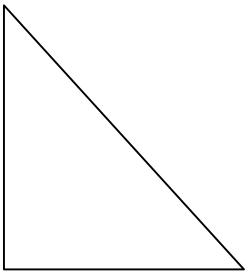
10.2



Draw the net that is folded to form the pyramid with rectangular base above. (2)

10.3 10.3.1 Which of the figures below have rotational symmetry?

(a) 

(b) 

10.3.2 Explain your choice. (1)

[9]

TOTAL SECTION B: 50

GRAND TOTAL: 100