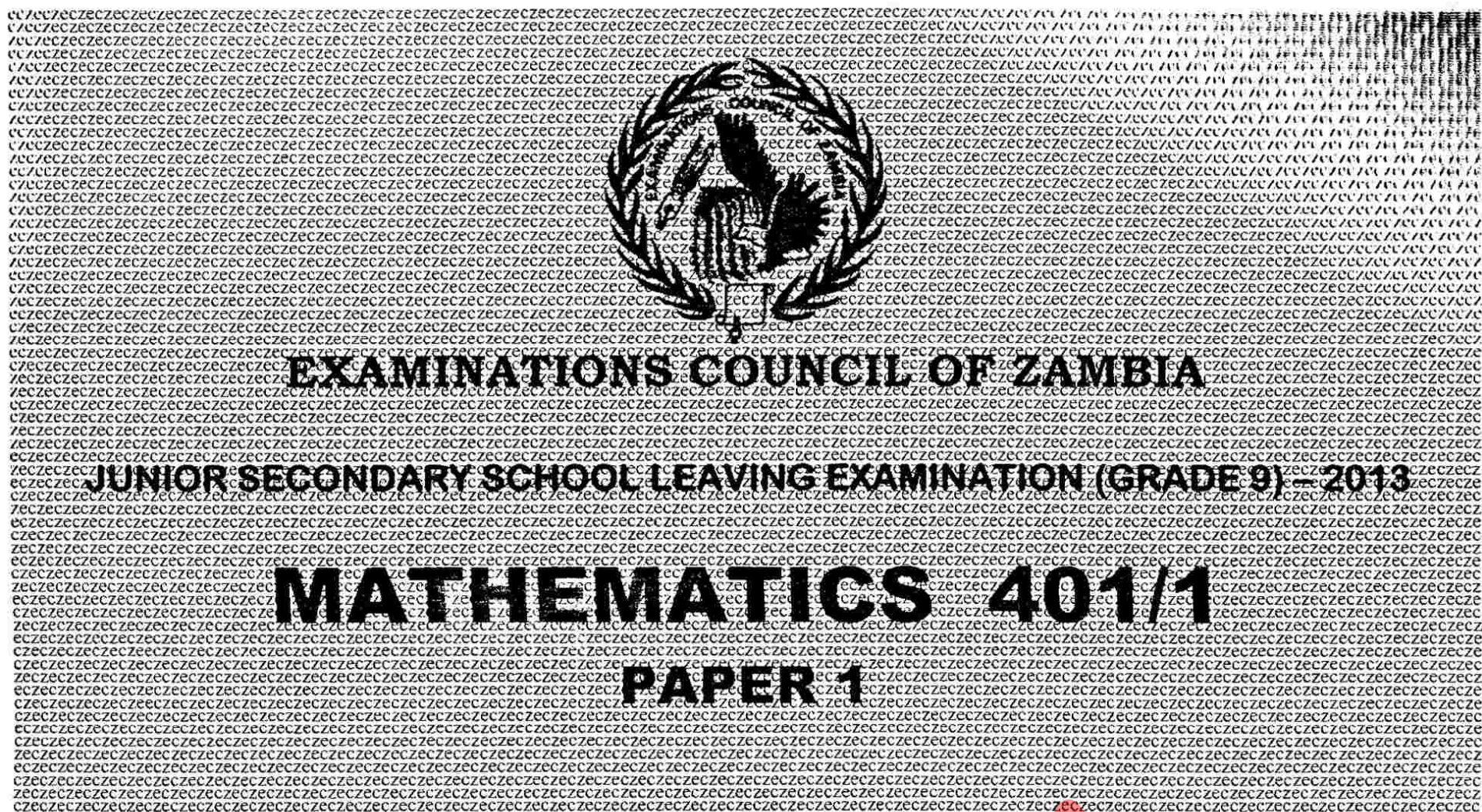




(INTERNAL AND EXTERNAL CANDIDATES)

TIME: 2 HOURS

MARKS: 50

NO READING TIME

INSTRUCTIONS TO CANDIDATES

1. Pull out the Answer Sheet from the question paper.
2. Write your name, examination number and school/centre on the Answer Sheet.

This paper consists of Sections A and B only. There are thirty (30) questions in this paper.

Section A: Answer **all** questions. Write the letter of the answer by marking a cross (X) on the Answer Sheet provided.
Question 1 – 10: 1 mark each.

Section B: Answer **all** questions. Write the answers in the spaces provided on the Answer Sheet.
Question 11 – 30: 2 marks each.

- Note:**
- 1 No paper for rough work is to be provided. Any working should be done on the question paper in the spaces provided.
 - 2 Cell phones and calculators are **not** allowed in the examination room.
 - 3 Only the Answer Sheet should be handed in.



EXAMINATIONS COUNCIL OF ZAMBIA
ANSWER SHEET FOR GRADE 9 MATHEMATICS PAPER 1 – 2013

NAME: _____

EXAMINATION NUMBER: _____

SCHOOL/CENTRE: _____

TOTAL MARKS: _____

Section A

For each question, mark your choice with a cross (X)

1					2					3					4					5				
A	B	C	D	E	A	B	C	D	E	A	B	C	D	E	A	B	C	D	E	A	B	C	D	E

6					7					8					9					10				
A	B	C	D	E	A	B	C	D	E	A	B	C	D	E	A	B	C	D	E	A	B	C	D	E

Section B

Write your answers in the spaces provided. Working must **NOT** be done on this paper.

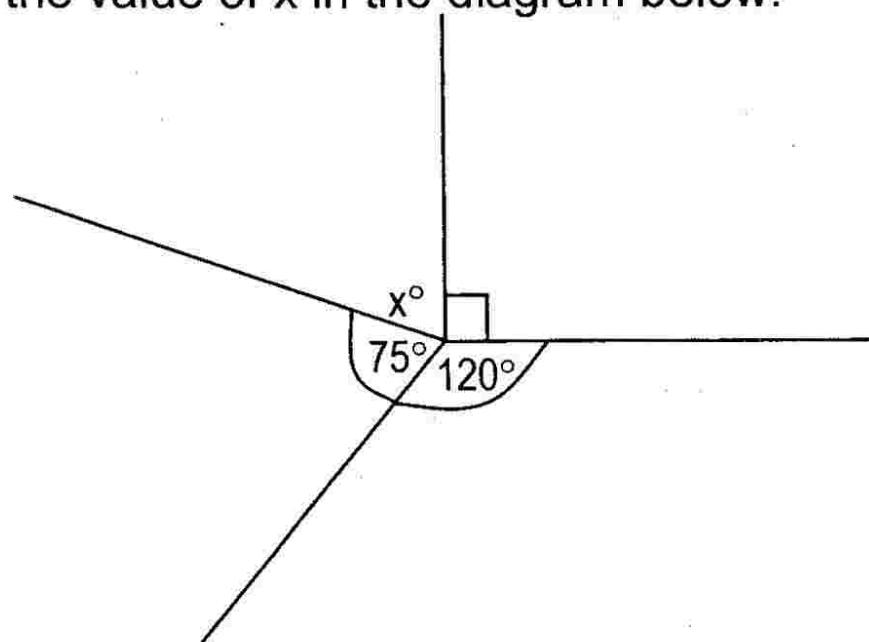
11	21 (a)	(b)
12	22	
13 (a)	(b)	23 (a)
14	24	
15 (a)	(b)	25
16	26	
17	27	
18	28	
19	29	
20	30	

SECTION A [10 MARKS]

1 Express 4 520 to the nearest 1000.

- A 4 000
- B 4 400
- C 4 500
- D 4 600
- E 5 000

2 Find the value of x in the diagram below.



- A 65°
- B 75°
- C 85°
- D 90°
- E 120°

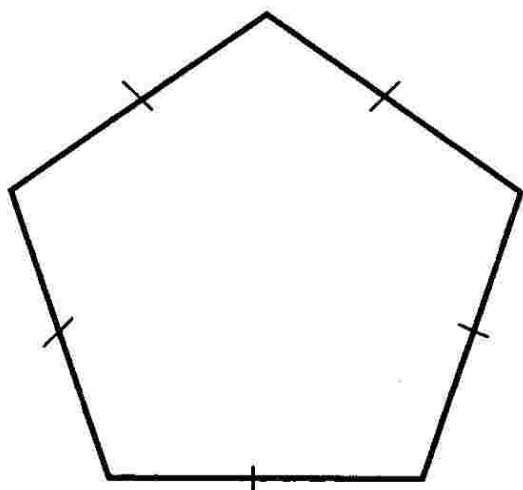
3 Simplify $5x + 2y - 6x - 2y + 2x$.

- A $17xy$
- B xy
- C $2x$
- D x
- E y

4 Find the sum of the first four prime numbers.

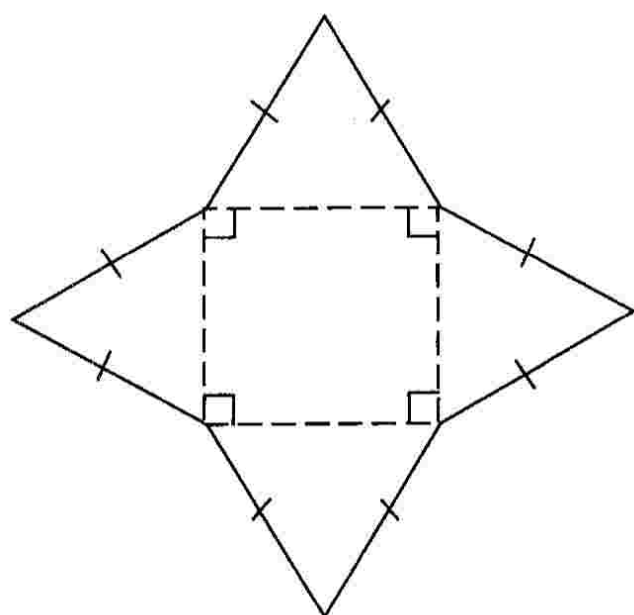
- A 10
- B 16
- C 17
- D 19
- E 20

- 5 How many lines of symmetry has the figure below?



- A 0
B 1
C 2
D 3
E 5
- 6 Find the next term in the sequence 5, 6, 8, 11, 15, ...
A 20
B 19
C 18
D 17
E 16
- 7 Express 9.5% as a decimal fraction.
A 95.0
B 9.5
C 0.95
D 0.095
E 0.0095
- 8 What is the median of 24, 18, 17, 16, 20, 30, 16?
A 16
B 18
C 20
D 24
E 30

- 9 The figure below is the net of a ...



- A cone.
B cube.
C pyramid.
D prism.
E kite.
- 10 Factorise completely $3m + 18m^2$.

- A $3m(1 + 6m)$
B $3m(1 + 9m)$
C $m(3 + 18m)$
D $3(m + 9m^2)$
E $3m(m + 6m^2)$

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SECTION B [40 MARKS]

11 Solve the equation $\frac{3}{p} = 12$.

12 Arrange the following numbers in descending order:

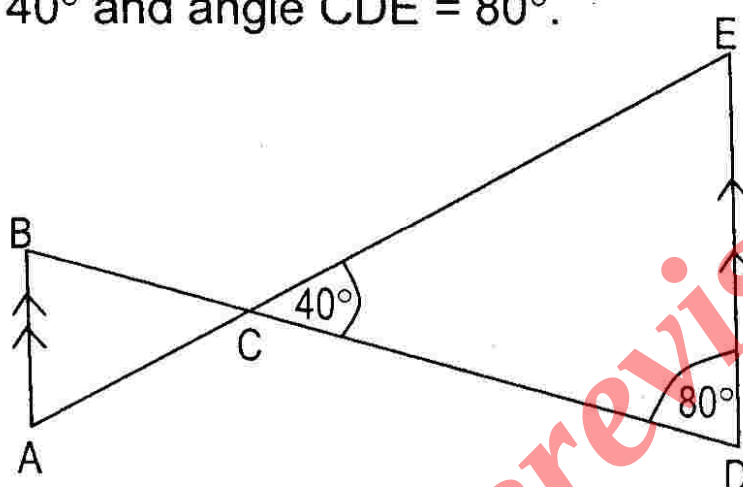
$-25, 0.5, \frac{1}{3}, 2$.

13 (a) Express 0.035 in percentage form.

(b) An Airtime Scratch Card Dealer earns 10% commission from the sale of each card. Calculate the commission the dealer will earn from the sale of 150 scratch cards at K5.00 each.

14 Evaluate $3.23\text{m} + 47\text{cm} + 5.1\text{m}$, giving your answer in **metres**.

15 (a) In the diagram below, AB is parallel to DE, angle DCE = 40° and angle CDE = 80° .

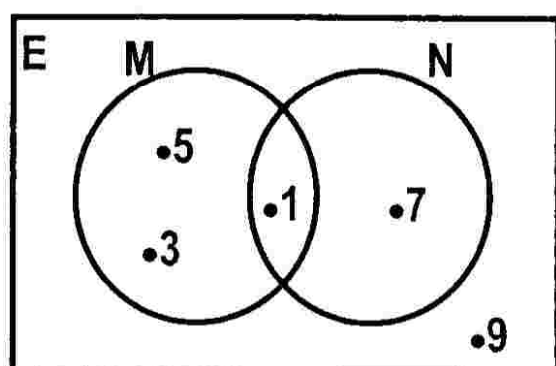


Find the size of angle ABC.

(b) Express 58.74cm to the nearest millimetre.

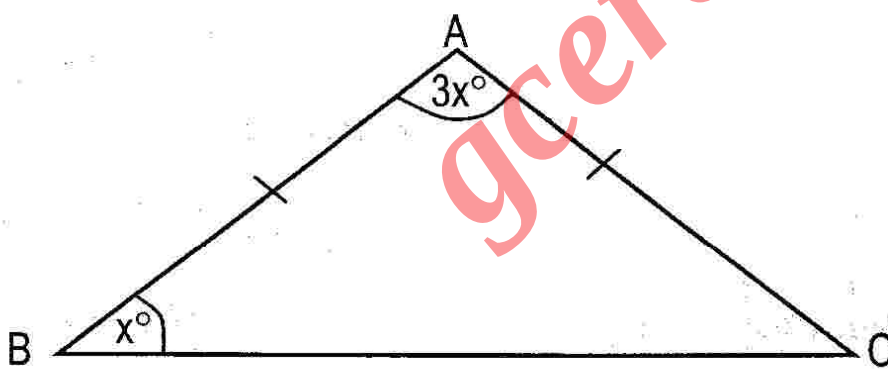
16 The area of a circle is 154cm^2 . Calculate the length of its radius. (Take $\pi = \frac{22}{7}$)

17 The Venn diagram below shows the relationship between set M and set N.



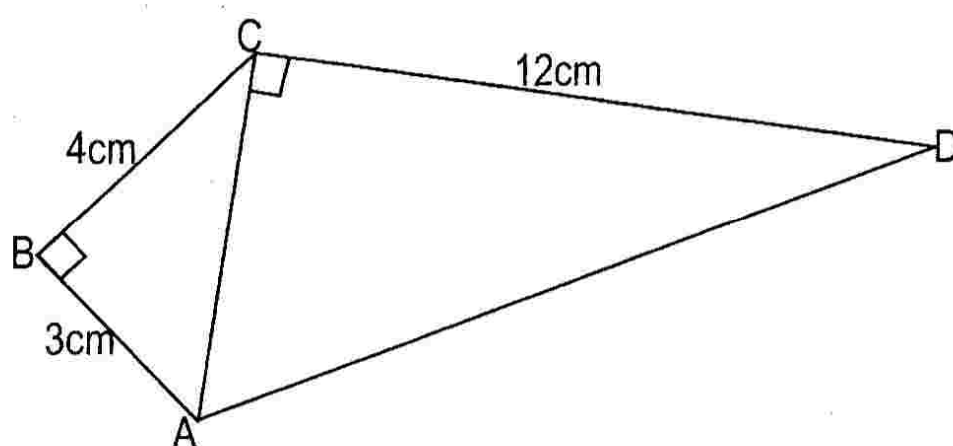
List the set M' .

- 18 A woman deposited K2 400.00 in her ZANACO bank account at the rate of 6% per annum for 12 months. Calculate the amount at the end of this period.
- 19 Solve the inequality $m - 4 > 3m + 8$.
- 20 A television programme lasted 1 hour 33 minutes. If it ended the following day at 01 25 hours, what time did it start?
- 21 (a) Find the value of $30 \times 5 \div 50$.
(b) Express the ratio 9g to 54g in its simplest form.
- 22 In a mixture of fruit juice, 25 litres was orange juice and 15 litres was mango juice. How many litres of orange juice would you expect in a mixture of 160 litres of fruit juice?
- 23 (a) Evaluate $5 + (0.5)^2$.
(b) A bus carried 52 pupils of whom 13 were girls. Express the number of boys as a fraction of the total number of pupils on the bus, in its lowest terms.
- 24 Triangle ABC below is an isosceles triangle in which $AB = AC$, angle $BAC = 3x^\circ$ and angle $ABC = x^\circ$. Find the value of x .



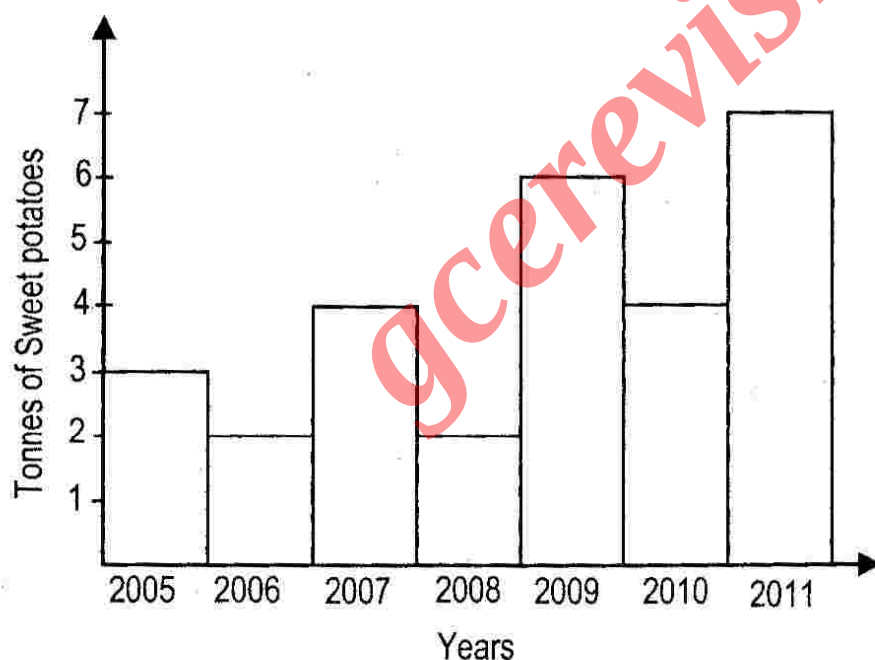
- 25 The information below is the Munzi Water and Sewerage Company's water tariffs:
The first 60 litres are charged at K2.00 per litre.
Anything above 60 litres is charged at K4.00 per litre.
Mr Mema used 160 litres of water in June. What was his total bill for the month of June?

- 26 Given that $m = -2$ and $n = -5$, find the value of $n^2 + 2m$.
- 27 The population of a newly created district in 2012 was 12 699. Express this number in standard form correct to 3 significant figures.
- 28 In the figure below, $AB = 3\text{cm}$, $BC = 4\text{cm}$, $CD = 12\text{cm}$ and $\angle ABC = \angle ACD = 90^\circ$.



Calculate the length of AD.

- 29 The bar chart below shows the production of sweet potatoes at Mwezi Farm Training Centre from 2005 to 2011.



How many tonnes of sweet potatoes were produced from 2006 to 2010?

- 30 Three children Akakulubelwa, Bubala and Chomba were given sweets. Akakulubelwa was given x sweets, Bubala was given 5 more than Akakulubelwa and Chomba had 10 more than Bubala. Express the number of sweets that Chomba got in terms of x , in its simplest form.