

09.05.2025



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First Term Test 2025**Mathematics -Grade 8****Time: 2 Hours**

Name :- Class :- Class Number :-

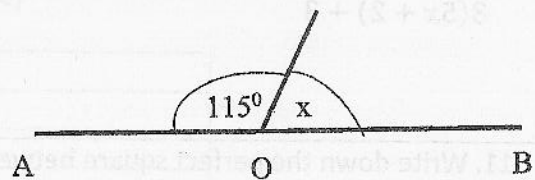
Part I

- Answer all questions on this paper itself.
- Each question carries 02 marks.

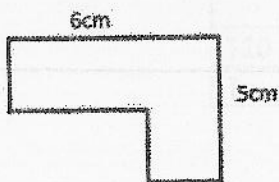
1. In the number pattern of 3, 6, 9, ..., find the 10th term.

2. What is the 15th term of the triangular number pattern?

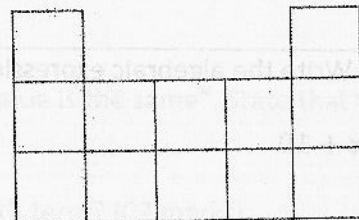
3. If AB is a straight line segment, find the magnitude of the angle marked by "x".



4. Find the perimeter of the given figure.



5. Find the perimeter of the following object which made out of square shaped wall tiles.
Length of each square shaped wall tile is 50cm.



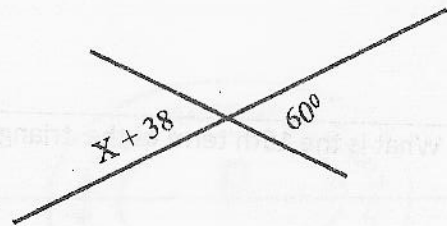
6. Find the value.

$$(+14) - (+5)$$

7. Find the value of $(+2) - (+4)$ by using a number line.

8. Find how many 250g of tea packets make using 2.5kg tea leaves.

9. Find the magnitude of "x".



10. Simplify.

$$3(5x + 2) + 3$$

11. Write down the perfect square between 20 and 50. (square numbers)

12. Find the square root of $\sqrt{144}$ using prime factors.

13. If a certain solid has 5 faces and 5 vertices. Find the number of edges.

14. Write the algebraic expression given below as a product of two factors.

$$6x + 10$$

15. Find the sum of perfect squares from 1 to 25.

16. Write the algebraic expression given below as a product of two factors.

$$12x^2 + 8xy - 4x$$

17. The price of a pencil is 'p' rupees, price of a book is 5 rupees more than 3 times of the price of a pencil. Write an algebraic expression for the price of 4 books.

18. Write 32, as a power of 2.

19. Find the value.

$$\frac{(+9) \times (-8)}{(-4) \times (+3)}$$

20. A patient has been advised by his doctor to take one tablet every 30 minutes. There are 4 tablets. If the patient starts to take tablets at 8.00am in the morning, calculate the time when he takes the last of 4 tablets.



Part II

- Answer to first question and another 04 more questions only. (5 questions in total)
- First question carries 16 marks and other questions carry 11 marks each.

5.09.2025

1.

a) The below net is obtained by removing the pasting allowances of a solid figure.

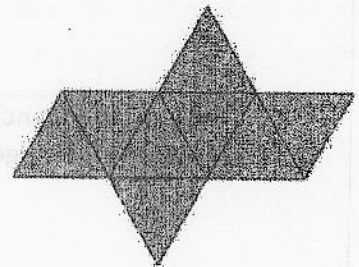
i) Write the name of the solid which can be constructed using the given net? (02 marks)

ii) Write the number of edges, vertices and faces of the above solid separately. (03 marks)

iii) Verify Euler's relationship for this solid. (02 marks)

iv) This solid is one of the platonic solids. Name other four platonic solids. (02 marks)

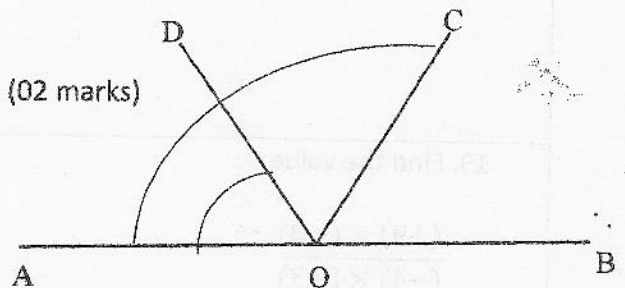
v) A certain solid has 20 faces and 30 edges. Find the number of vertices it has by using Euler's relationship. (02 marks)



b)

i) Name a pair of adjacent angles of the given diagram. (02 marks)

ii) In the figure, are $\angle AOD$ and $\angle AOC$ pair of adjacent angles? Give reasons for your answer (03 marks)

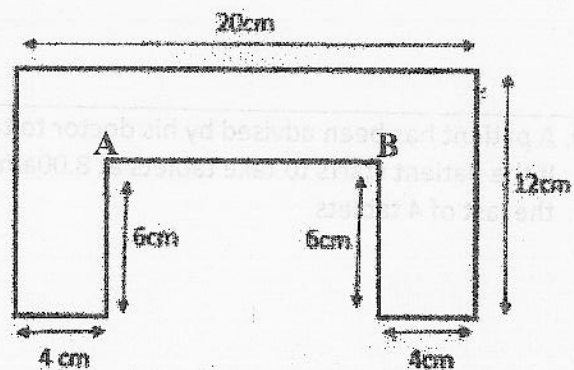


2.

a) In the below figure,

i) Find the length of AB. (01 mark)

ii) Find the perimeter. (04 mark)



b) An equilateral triangle and a square made out of two iron wire which has the same length. Side length of the equilateral triangle is 20cm.

i. Find the perimeter of the equilateral triangle. (02 marks)

ii. Find the length of a side of the square. (02 marks)

iii. Find the total length of the iron wires required to make 6 squares similar to above square. (02 marks)



3.

a) Simplify.

i. $3(x + 5)$ (01 mark)

ii. $5(y - 5) + 3y$ (02 marks)

iii. $3(3a - 2b + 4) - (a + b)$ (02 marks)

b) Price of a mango is 'm' rupees and price of an orange is 3 rupees less than 2 times of the price of a mango.

i) Write an algebraic expression for the price of an orange. (01 mark)

ii) Write an algebraic expression using brackets for the price of five such oranges. (01 mark)

iii) Write an algebraic expression for the total price of 5 oranges and 3 mangoes and simplify it. (02 marks)

iv) If the price of a mango is 20 rupees, find the total price of 5 oranges and 3 mangoes. (02 marks)

4.

a) A student prepared the below table to find the general term. Complete the table by fill in the correct answers in the blanks. (no need to draw the table)

T1	$2 \times 1 - 1$	1
T2	$2 \times 2 - 1$	3
T3	$2 \times 3 - 1$	5
.	.	.
.	.	.
.	.	.
T10	i)	ii).....
Tn	$2 \times n - 1$	iii).....

(03 marks)

b) In the pattern of the odd numbers starting from 1,

i. What is the 25th term? (02 marks)

ii. Which term is 77? (02 marks)

c)

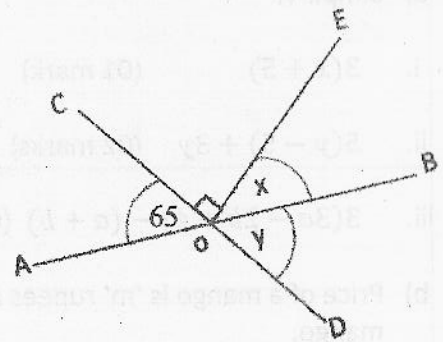
i. Nimal says "sixth square number and eighth triangular number value is the same". State that this statement is true or false. Give reasons. (02 marks)

ii. In the number pattern with general term $3n+5$. What is the 10th term? (02 marks)

5.

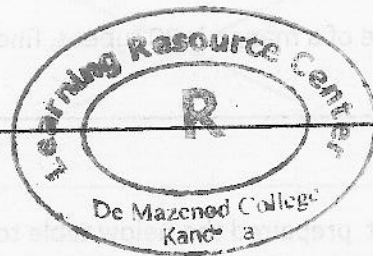
a) In the figure, AB and CD are straight line segments.

- Name a pair of complementary angles. (01 mark)
- Name a pair of supplementary angles. (01 mark)
- Name a pair of adjacent angles. (01 mark)
- Find the magnitude of 'x' and 'y'. Give reasons for your answer. (02 marks)



b) Write each algebraic expression given below as a product of two factors.

- $4x + 6$ (02 marks)
- $3x^2 - 5x$ (02 marks)
- $12a^2 + 4a$ (02 marks)



6.

a) An area of a square shaped pond is 400m^2 .

- Find the length of the pond. (02 marks)
- A protective fence is planned to be constructed around this pond. Find the perimeter of the fence. (01 marks)
- The construction cost of the fence is Rs. 7500 per meter. Calculate the total cost to contract the protective fence. (01 marks)
- Write 784 as a product of prime factors. (02 marks)
- Write the above expression in index notation. (01 mark)
- Find square root of $\sqrt{784}$ using prime factors or any other method. (02 marks)

b) Find the value.

i.	kg	g
	3	055
	+ 8	425

(01 marks)

ii.	kg	g
	8	456
	- 6	897

(01 marks)