A

Samagra Shiksha, Kerala
SUMMATIVE ASSESSMENT TERM I 2025-26
MATHEMATICS

Class : VIII

Time:$1\frac{1}{2}$ Hrs.

Score:40

Instructions:
- Use the first 15 minutes to read the questions and think about answers.
- There are 16 questions, split in to 4 parts A, B, C, D
- Answer all questions; but in questions of the type **A** or **B** you need answer only one of those.
- You can answer the questions in any order, writing the correct question number.
- Answers must be explained, whenever necessary.

Section A

This section has 4 questions of score 1 each. Select the correct answer.

1. Select the suitable answer?

   $13^2 = 10^2 + \ldots\ldots + 3^2$

   A) $10 \times 3 \times 2$ B) $10 \times 3 \times 1$ C) $13 \times 3 \times 2$ D) $10 \times 6 \times 2$

2. Read the given statements.

   Statement I: If the lengths of the sides of two triangles are the same, then their angles are also the same.

   Statement II: If the angles of a triangle is same as the angles of another triangle, the lengths of their sides are also the same.

   Choose the correct answer from those given below.

   A) Statement **I** is true, Statement **II** is false

   B) Statement **I** is false, Statement **II** is true

   C) Both the statement are true, Statement **II** is the reason of Statement **I**.

   D) Both the Statements are true, Statements **II** is not the reason of Statement **I**.
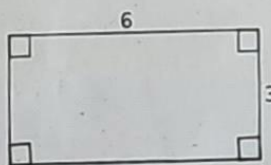
3. $123^2 = 15129.$
       $(12.3)^2 = \ldots\ldots\ldots\ldots$

   A) 15129   B) 15.129   C) 1.5129·   D) 151.29
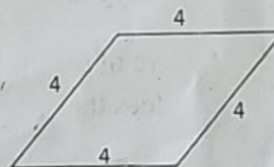
4. Which of the following are regular polygons?

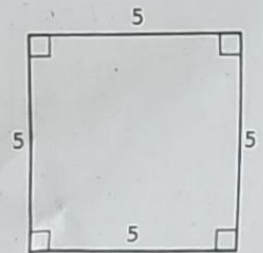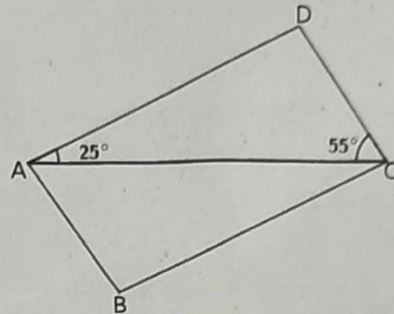(i)   (ii)   (iii)   (iv)

E803
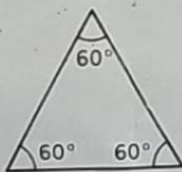
A) i, ii   B) iii, iv   C) i, ii   D) i, iv

Section B

This section has 4 questions of score 2 each

5. In the figure, ABCD is a parallelogram.
   $\angle CAD = 25^0, \angle ACD = 55^0$.

   (i) What is $\angle ADC$?

   (ii) What is $\angle ABC$?
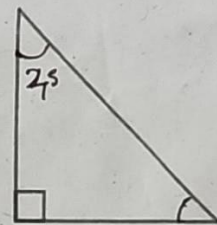
6. Find the missing numbers.

   (i) $\left(2\frac{1}{2}\right)^2 = 2^2 + 2 + \ldots\ldots$

   (ii) $\left(7\frac{1}{2}\right)^2 = \ldots\ldots\ldots + \frac{1}{4}$

7. Is the sum of angles of any polygon equal to $3600°$? Why?

8. In the figure, perpendicular sides of the right triangle are equal.
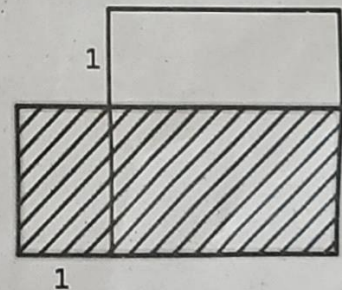   Find the measures of two small angles.

Section C

This section has 4 questions of score 3 each

9. In the figure, the shaded rectangle is obtained by adding and
    subtracting the sides of the square by 1 centimetre.

    (i)   Taking the sides of the square as x, write the sides of the
          shaded rectangle.

    (ii) Find the area of the shaded rectangle.

    (iii) Which has more area, square or rectangle?

10. One inner angle of a regular polygon is 135^0.

    (i) What is the measure of one outer angle of this polygon?

    (ii) How many sides does the polygon have?

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A) In the figure, all the sides of the quadrilateral are equal. Prove that the line joining the opposite vertices of this quadrilateral bisects the angles at these vertices.

OR

B) Prove that if two sides of a triangle are equal then their opposite angles are also equal.

12.

A) $35^2 = 1225$. Using this,
   (i) Calculate the square of 36 ?
   (ii) What is the square of 33 ?

OR

B)   See the given Pattern.

$$3 = 2^2 - 1^2$$
$$5 = 3^2 - 2^2$$
$$7 = 4^2 - 3^2$$

   (i) Write the next line.
   (ii) Write 15 as the difference of two perfect squares in two different ways.

Section D

This section has 4 questions of score 4 each

13. (i) What is the measure of one outer angle of a regular pentagon?

   (ii) Draw a regular pentagon of sides 4 cm.

14. Some numbers are given to calculate the square of a two digit number in a particular method.

   (i)   Write the numbers denoting A, B, C, D.
   (ii) The square of which number is calculated?
   (iii) What is the square of that number?

	A	B 6
40	1600	C 240
B 6	D 240	36

15 A)

    (i)   Write the squares of two numbers end in 6.

    (ii)   Is square of any number ending in 6 also end in 6 ? Explain using algebra.
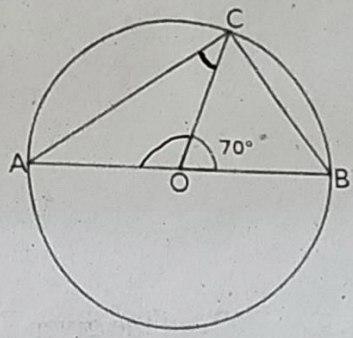
<div align="center">OR</div>

B) (i) Write the remainder got when the perfect squares 1, 4, 9, 16, 25 on division by 3.

    (ii) The square of any non-multiple of 3 leaves remainder 1 on division by 3.

    Explain the reason.

16.

    (A) In the figure, O is center of the circle. AB is the diameter.
$\angle BOC = 70^0$

        (i) $\angle AOC =$...............

        (ii)   Find the three angles of $\triangle ABC$.

<div align="center">OR</div>

    (B) In the figure, M is the midpoint of the lines AB, CD

        (i)   Write one pair of equal angles in triangles
                AMC and BMD.

        (ii)   Are the lengths of the lines AC, BD equal?
                Write the reason.