Mathematics

Practice Test Paper 4

(Ganita Prakash Part 2 | Chapter 2: The Baudhāyana-Pythagoras Theorem)

Class VIII | 2026–27

Time Allowed: 45 Minutes | Maximum Marks: 25

General Instructions

1. All 13 questions are compulsory. The paper has four sections: A, B, C and D.
2. Section A - 5 marks; Section B - 8 marks; Section C - 9 marks; Section D - 3 marks.
3. Choose one correct option in Section A. Show the necessary working in Sections B, C and D.
4. Study the images and graphs carefully before answering the related questions.

SECTION A

(5 questions × 1 mark = 5 marks)

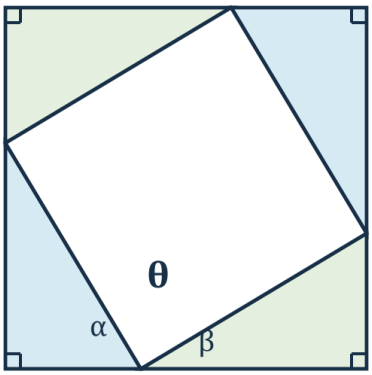
1. Joining the midpoints of the sides of a square produces a square with:

(A) The same area
(B) Half the area
(C) Double the area
(D) One-fourth the area

2. An isosceles right triangle has hypotenuse $\sqrt{98}$ cm. Each other side is:

(A) 7 cm
(B) 14 cm
(C) 49 cm
(D) $\sqrt{98}$ cm

3. Four congruent right triangles surround the central square. The two marked acute angles add to 90°. What is angle θ?



(A) 45°
(B) 60°
(C) 90°
(D) 180°

4. Which common factor shows that (15, 36, 39) is not primitive?

(A) 2
(B) 3
(C) 5
(D) 7

5. Which is the next odd number after $2n - 1$?

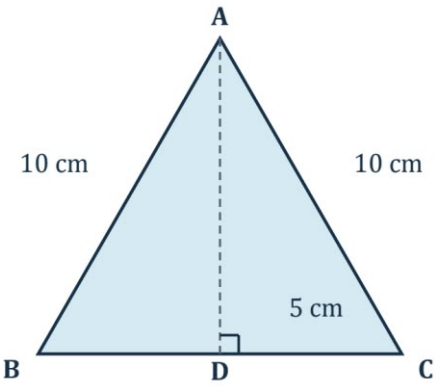
(A) $2n$ (B) $n + 1$

(C) $2n + 1$ (D) $2n + 3$

SECTION B

(4 questions × 2 marks = 8 marks)

6. ABC is an equilateral triangle and AD is perpendicular to BC. D is its midpoint. Use the diagram to find AD and the area of ABC. Give exact answers.



7. Check whether (10, 15, 20) satisfies the square-sum condition for a Baudhāyana triple. Explain your decision.

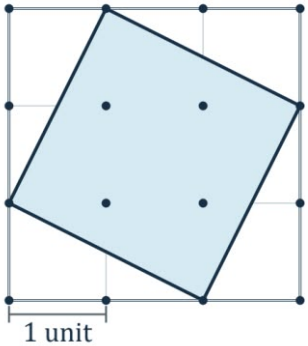
8. A square has side 11 cm. Find the area and side length of a square with half its area.

9. Use the odd square 81 to write a Baudhāyana triple. Which two members are consecutive?

SECTION C

(3 questions × 3 marks = 9 marks)

10. The grid has unit spacing. The tilted square lies inside a 3-unit by 3-unit square. Find its area by subtracting the four corner triangles. Then find its side length.



11. A right triangle has hypotenuse $\sqrt{200}$ cm and a leg of 10 cm. Find the other leg. Decide whether the triangle is isosceles and find its area.

12. Show that (8, 15, 17) is primitive. Explain why it is not produced by the odd-square method that gives consecutive longer sides.

SECTION D

(Application Based Question - 3 marks)

13. A rectangular noticeboard is 12 dm by 35 dm. A strip runs from one corner to the opposite corner.

(i) Find the strip length.

(ii) Find the board's area.

(iii) Find the total length of edging needed around the board.