Mathematics

Practice Test Paper 9

(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)

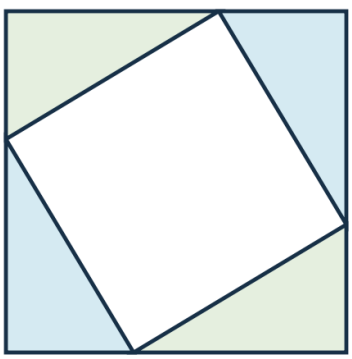
1. If a right triangle has two non-zero legs, the square on its hypotenuse has area:

(A) Less than either smaller square
(B) Equal to each smaller square
(C) Greater than each smaller square
(D) Always 1 square unit

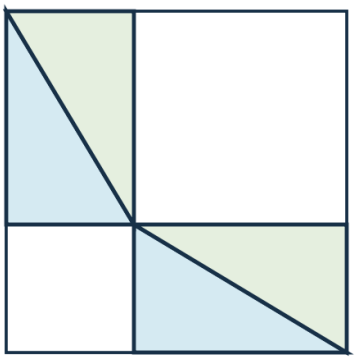
2. Which statement about every Baudhāyana triple is correct?

(A) All members are odd
(B) The largest member is the hypotenuse length
(C) Every member is a perfect square
(D) All members are consecutive

3. Both large squares are equal, and each contains four congruent coloured right triangles. What can be said about the total white area in the two arrangements?



I



II

(A) It is equal
(B) It is greater on the left
(C) It is greater on the right
(D) It is zero

4. Which number is not a member of the primitive triple obtained by reducing (21, 28, 35)?

(A) 3

(B) 4

(C) 5

(D) 7

5. For positive n, which expression equals $(n+1)^2 - n^2$?

(A) $2n - 1$

(B) $2n$

(C) $2n + 1$

(D) $n^2 + 1$

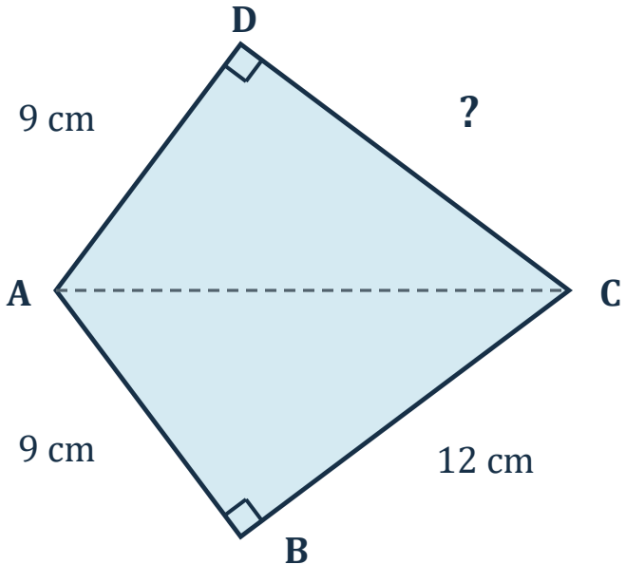
SECTION B

(4 questions × 2 marks = 8 marks)

6. A square and an isosceles right triangle have the same leg/side length, 8 cm. Compare the square's diagonal with the triangle's hypotenuse. Find their exact common length.

7. Use (3, 4, 5) to find the integer-sided rectangle whose shorter side is 21 cm and whose diagonal follows the same triple. Find its longer side and diagonal.

8. The quadrilateral is split into two right triangles by AC. Find AC and then find the missing outer side CD.

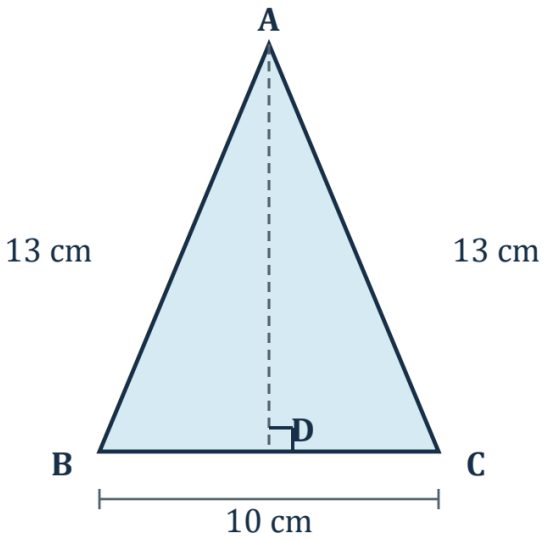


9. Find whole-number bounds for $\sqrt{150}$. Then decide whether 12.2 is smaller or larger than this square root.

SECTION C

(3 questions × 3 marks = 9 marks)

10. AB = AC, and AD meets BC at a right angle at its midpoint. Find AD and the area and perimeter of triangle ABC.



11. Two students propose (9, 40, 41) and (9, 41, 42) as triples. Check both using squares and explain which proposal is correct.

12. A square is built on each side of a right triangle. The largest square has area 225 cm^2, and the difference between the two smaller areas is 63 cm^2. Find the two smaller areas and the three side lengths.

SECTION D

(Application Based Question - 3 marks)

13. A student uses the odd-square method with 169.

(i) Find n if $2n - 1 = 169$.

(ii) Write the resulting triple.

(iii) Check the square-sum equality.