CLASS 8 MATHS REVISION NOTES

Revision Notes for Class 8 Maths Chapter 9: The Baudhayana-Pythagoras Theorem

Condensed revision notes for Class 8 Maths Chapter 9: The Baudhayana-Pythagoras Theorem - Ganita Prakash.

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Baudhayana-Pythagoras theorem: in a right triangle, (hypotenuse)^2 = (leg 1)^2 + (leg 2)^2.

Indian origin: Baudhayana recorded this relationship in the Sulba Sutras, used for altar construction, centuries before Pythagoras in Greece.

Isosceles right triangle: hypotenuse = side × $\sqrt{2}$.

Doubling/halving a square: cutting along the diagonal and rearranging the resulting triangles relates areas by a factor of 2 — the basis of the theorem's classic paper-folding proof.

Baudhayana (Pythagorean) triple: three positive integers (a,b,c) with $a^2+b^2=c^2$.

Primitive triple: HCF(a,b,c) = 1; e.g. (3,4,5), (5,12,13), (8,15,17).

Non-primitive triple: a whole-number multiple of a primitive triple, e.g. (6,8,10) = 2×(3,4,5).

Odd-square generation method: for odd n ≥ 3, the triple $(n, (n^2-1)/2, (n^2+1)/2)$ is always a primitive Baudhayana triple.

Hypotenuse is always the longest side of a right triangle.

Lattice-grid square rule: a square of area x can be drawn on a dot grid exactly when $x = p^2+q^2$ for integers p, q.

Applications: finding missing sides of right triangles; diagonals of squares, rectangles and rhombi (via half-diagonals); area of an equilateral triangle via its altitude.

Fermat's Last Theorem (mentioned narratively in the chapter): no positive integer solutions exist for $a^n+b^n=c^n$ when n > 2 — conjectured for centuries, proven true only in 1994.

More on this chapter: Solutions | Extra Questions | Class 8 Maths Book | Formulas Handbook