

Activity Worksheet

Challenging brain

Sub : Mathematics

Grade: X

Date:

Name:

ID No.....

Assignment

1. In a quadrilateral ABCD, $\angle A + \angle D = 90^\circ$. Prove that $AC^2 + AD^2 = AB^2 + BC^2$.

Sol.

2. Prove that the area of the equilateral triangle drawn on the hypotenuse of a right angled triangle is equal to the sum of the area of the equilateral triangles drawn on the other two sides of the triangle.

Sol.

3. BL and CM are medians of a triangle ABC, right angled at A. Prove that $4(BL^2 + CM^2) = 5AC^2$.

Sol.

4. Prove that the sum of the squares of the sides of a rhombus is equal to the sum of the squares of its diagonals.

Sol.

5. In a triangle PQR, N is a point on PR such that $QN \perp PR$. If $PQ^2 + NR^2 = PN^2 + QR^2$, prove that $\angle PQN = 90^\circ$.

Sol.
