

St. Francis Xavier School
Work Sheet
Subject – Mathematics
Class – IX

Question 1:

If two angles of a quadrilateral are 40° and 110° and the other two are in the ratio 3 : 4 , find these angles

Question 2:

If the angles of a quadrilateral, taken in order, are in the ratio 1 : 2 : 3 : 4, prove that it is a trapezium.

Question 3:

If the angle of a parallelogram is two thirds of its adjacent angle, find the angles of the parallelogram.

Question 4:

If ABCD is a rectangle in which the diagonal BD bisects angle B, then show that ABCD is a square.

Question 5:

Simplify: If $2^x = 3^y = 6^{-z}$ Prove that $1/x + 1/y + 1/z = 0$

Question 6:

Simplify: If $a = c^z$, $b = a^x$ and $c = b^y$, prove that $xyz = 1$

Question 7:

The perimeter of a rectangular cardboard is 96 cm; if its breadth is 18 cm, find the length and the area of the cardboard.

Question 8:

Prove that every diagonal of a rhombus bisects the angles at the vertices.

Question 9:

In a rhombus, if diagonals are 30 cm. and 40 cm, find its perimeter.

Question 10:

Simplify: If $2^x = 3^y = 12^z$ Prove that $x = 2xz / (y - z)$