

Ques: Prove Euler's formula for a polyhedron with 12 faces, 20 vertices, and 30 edges.

Ans: We have Euler's formula,

$$\underline{\text{Number of faces} + \text{number of vertices} - \text{number of edges} = 2}$$

Here we have,

$$12 + 20 - 30 = 32 - 20$$

$$= 2$$

Hence, Euler's formula is proved.