Exercise 16A

In ΔABC, if we take a point D on BC, then we get three triangles, namely ΔADB, ΔADC and ΔABC.

Q11

Answer :

(i) No

If the two angles are 90° each, then the sum of two angles of a triangle will be 180°, which is not possible.

(ii) No

For example, let the two angles be 120° and 150°. Then, their sum will be 270°, which cannot form a triangle.

(iii) Yes

For example, let the two angles be 50° and 60°, which on adding, gives 110°. They can easily form a triangle whose third angle is 180° - 110° = 70°.

(iv) No

For example, let the two angles be 70° and 80°, which on adding, gives 150°. They cannot form a triangle whose third angle is 180° - 150° = 30°, which is less than 60°.

(v) No

For example, let the two angles be 50° and 40°, which on adding, gives 90° . Thus, they cannot form a triangle whose third angle is 180° - 90° = 90°, which is greater than 60°.

(vi) Yes

Sum of all angles = 60° + 60° + 60° = 180°

Q12

Answer :

(i) A triangle has 3 sides 3 angles and 3 vertices.

(ii) The sum of the angles of a triangle is 180º.

(iii) The sides of a scalene triangle are of different lengths.

(iv) Each angle of an equilateral triangle measures 60º.

(v) The angles opposite to equal sides of an isosceles triangle are equal.

(vi) The sum of the lengths of the sides of a triangle is called its perimeter.

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