

Name

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Std.

VII

~~Div.~~

sec - B

Exercise 15 (A)

1. State if the triangles are possible with the following angles

i) 20° , 70° , and 90°

Sum of 20° , 70° and $90^\circ = 20^\circ + 70^\circ + 90^\circ = 180^\circ$ - possible

ii) 40° , 130° , and 20°

Sum of 40° , 130° , $20^\circ = 40^\circ + 20^\circ + 130^\circ = 190^\circ$ - not possible

iii) 60° , 60° and 50°

Sum of 60° , 60° , and $50^\circ = 60^\circ + 60^\circ + 50^\circ = 170^\circ$ - not possible

iv) 125° , 40° and 15°

Sum of 125° , 40° , and $15^\circ = 125^\circ + 40^\circ + 15^\circ = 180^\circ$ - possible.

2. If the angles of a triangle are equal, find its angles.

The 3 angles of a triangle are equal and their sum is

$$\text{So each angle} = \frac{180^\circ}{3} = 60^\circ$$

3. In a triangle ABC $\angle A = 45^\circ$ and $\angle B = 75^\circ$, find $\angle C$.

The sum of a triangle $= 180^\circ$

$$\angle A + \angle B + \angle C = 180^\circ$$

$$45^\circ + 75^\circ + \angle C = 180^\circ$$

$$120^\circ + \angle C = 180^\circ$$

$$\angle C = 180^\circ - 120^\circ = 60^\circ$$