Exercise 16B

Q1

Answer :

Correct option: (c)

A triangle has 6 parts: three sides and three angles.

Q2

Answer :

Correct option: (b)

(a) Sum = 30° + 60° + 70° = 160°

This is not equal to the sum of all the angles of a triangle.

(b) Sum = 50° + 70° + 60° = 180°

Hence, it is possible to construct a triangle with these angles.

(c) Sum = 40° + 80° + 65° = 185°

This is not equal to the sum of all the angles of a triangle.

(d) Sum = 72° + 28° + 90° = 190°

This is not equal to the sum of all the angles of a triangle.

Q3

Answer :

(b) 80^o

Let the measures of the given angles be $(2x)^o$, $(3x)^o$ and $(4x)^o$.

$\therefore (2x)^o + (3x)^o + (4x)^o = 180^o$

$\Rightarrow (9x)^o = 180^o$

$\Rightarrow x = 180 / 9$

$\Rightarrow x = 20^o$

$\therefore 2x = 40^o, 3x = 60^o, 4x = 80^o$

Hence, the measures of the angles of the triangle are 40^o, 60^o, 80^o.

Thus, the largest angle is 80^o.

Q4

Answer :

Correct option: (d)

The measure of two angles are complimentary if their sum is 90^o degrees.

Let the two angles be x and y, such that $x + y = 90^o$.

Let the third angle be z.

Now, we know that the sum of all the angles of a triangle is 180^o.

$x + y + z = 180^o$

$\Rightarrow 90^o + z = 180^o$

$\Rightarrow z = 180^o - 90^o$

$= 90^o$

The third angle is 90^o.

Q5

Answer :

Correct option: (c)

Let $\angle A = 70^o$

The triangle is an isosceles triangle.

We know that the angles opposite to the equal sides of an isosceles triangle are equal.

$\therefore \angle B = 70^o$

We need to find the vertical angle $\angle C$.

Now, sum of all the angles of a triangle is 180^o.

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

$\Rightarrow 70^o + 70^o + \angle C = 180^o$

$\Rightarrow 140^o + \angle C = 180^o$

$\Rightarrow \angle C = 180^o - 140^o$

$\Rightarrow \angle C = 40^o$

********** END **********