

Mathematics

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(Chapter – 5) (Introduction to Euclid's Geometry)(Exemplar Problems)
(Class – IX)

Exercise 5.3

Solve each of the following question using appropriate Euclid's axiom:

Question 4:

In the Fig.5.4, we have $AB = BC$, $BX = BY$. Show that $AX = CY$.

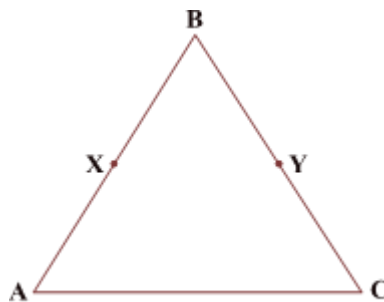


Fig. 5.4

Answer 4:

We have,

$$AB = BC \quad \dots(i)$$

and

$$BX = BY \quad \dots(ii)$$

According to Euclid's axioms, if equals are subtracted from equals, the remainders are Equal.

So, on subtracting equation (ii) from equation (i), we get

$$\begin{aligned} \Rightarrow \quad AB - BX &= BC - BY \\ \quad \quad \quad AX &= CY \end{aligned} \quad \text{[From figure]}$$

