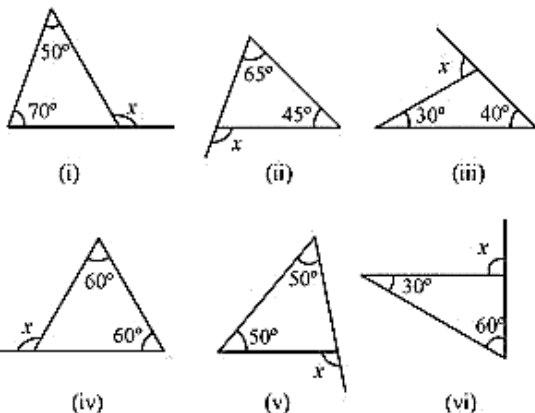


Board – CBSE

Class – 7th

Topic – The Triangle and Its Properties 6.2

**Q.1** Find the value of the unknown exterior angle  $x$  in the following diagrams:



**Sol:** (i)  $x = 50^\circ + 70^\circ$  (Exterior angle theorem)

$$x = 120^\circ$$

(ii)  $x = 65^\circ + 45^\circ$  (Exterior angle theorem)

$$x = 110^\circ$$

(iii)  $x = 40^\circ + 30^\circ$  (Exterior angle theorem)

$$x = 70^\circ$$

(iv)  $x = 60^\circ + 60^\circ$  (Exterior angle theorem)

$$x = 120^\circ$$

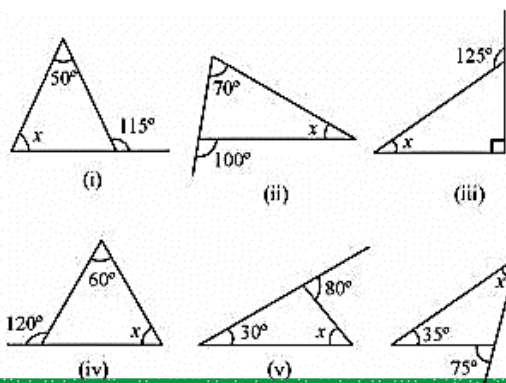
(v)  $x = 50^\circ + 50^\circ$  (Exterior angle theorem)

$$x = 100^\circ$$

(vi)  $x = 30^\circ + 60^\circ$  (Exterior angle theorem)

$$x = 90^\circ$$

**Q.2** Find the value of the unknown interior angle  $x$  in the following figures:



- Sol:**
- (i)  $x + 50^\circ = 115^\circ$  (Exterior angle theorem)  
 $x = 115^\circ - 50^\circ = 65^\circ$
- (ii)  $70^\circ + x = 100^\circ$  (Exterior angle theorem)  
 $x = 100^\circ - 70^\circ = 30^\circ$
- (iii)  $x + 90^\circ = 125^\circ$  (Exterior angle theorem)  
 $x = 125^\circ - 90^\circ = 35^\circ$
- (iv)  $x + 60^\circ = 120^\circ$  (Exterior angle theorem)  
 $x = 120^\circ - 60^\circ = 60^\circ$
- (v)  $x + 30^\circ = 80^\circ$  (Exterior angle theorem)  
 $x = 80^\circ - 30^\circ = 50^\circ$
- (vi)  $x + 35^\circ = 75^\circ$  (Exterior angle theorem)  
 $x = 75^\circ - 35^\circ = 40^\circ$