

Mathematics

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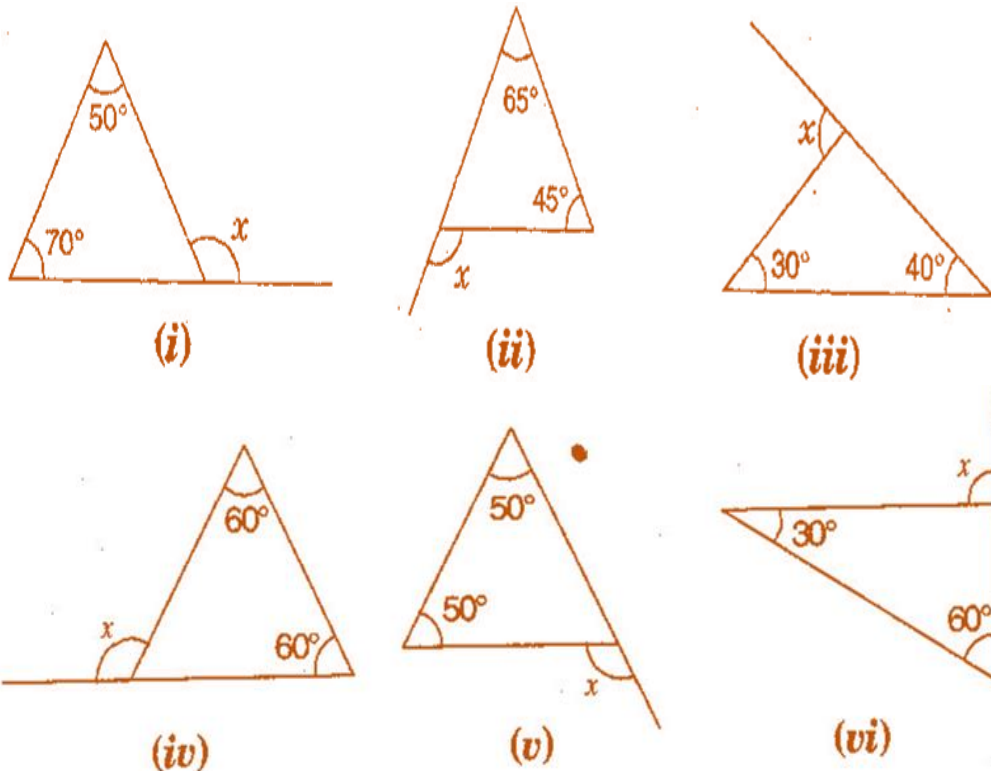
(Chapter – 6) (The Triangle and its Properties)

(Class – VII)

Exercise 6.2

Question 1:

Find the value of the unknown exterior angle x in the following diagrams:



Answer 1:

Since, Exterior angle = Sum of interior opposite angles, therefore

(i) $x = 50^\circ + 70^\circ = 120^\circ$

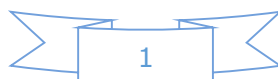
(ii) $x = 65^\circ + 45^\circ = 110^\circ$

(iii) $x = 30^\circ + 40^\circ = 70^\circ$

(iv) $x = 60^\circ + 60^\circ = 120^\circ$

(v) $x = 50^\circ + 50^\circ = 100^\circ$

(vi) $x = 60^\circ + 30^\circ = 90^\circ$



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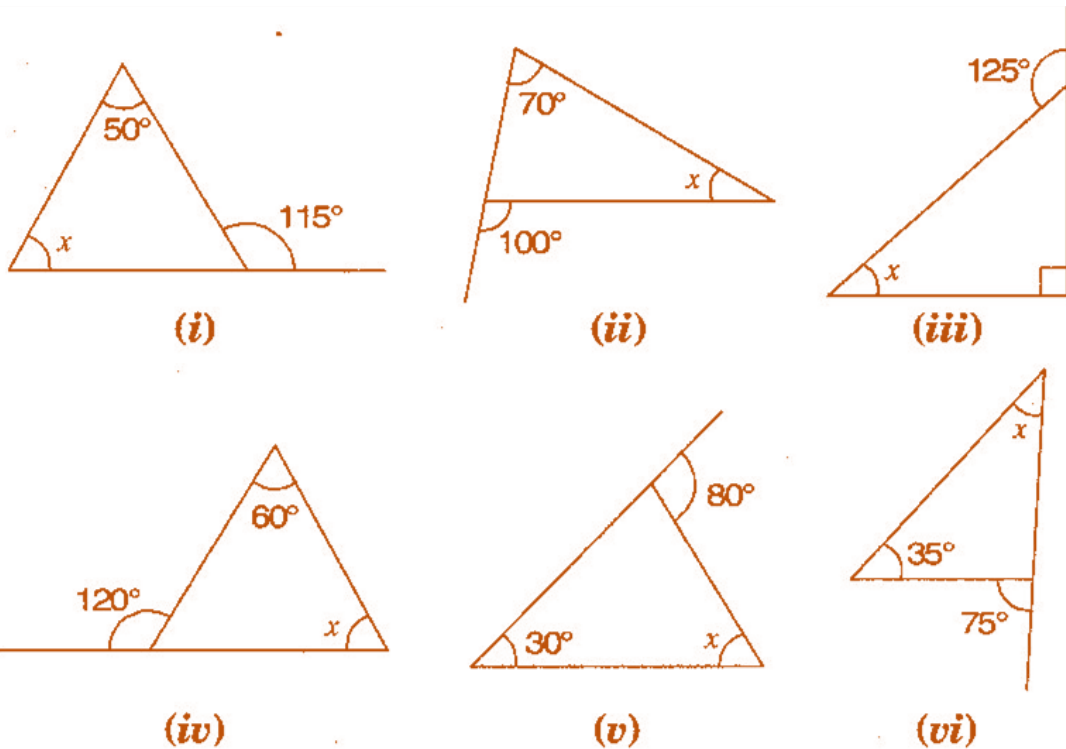
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(Chapter – 6) (The Triangle and its Properties)

(Class – VII)

Question 2:

Find the value of the unknown interior angle x in the following figures:



Answer 2:

Since, Exterior angle = Sum of interior opposite angles, therefore

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|-------|----------------------------|---------------|---------------------------------------|
| (i) | $x + 50^\circ = 115^\circ$ | \Rightarrow | $x = 115^\circ - 50^\circ = 65^\circ$ |
| (ii) | $70^\circ + x = 100^\circ$ | \Rightarrow | $x = 100^\circ - 70^\circ = 30^\circ$ |
| (iii) | $x + 90^\circ = 125^\circ$ | \Rightarrow | $x = 125^\circ - 90^\circ = 35^\circ$ |
| (iv) | $60^\circ + x = 120^\circ$ | \Rightarrow | $x = 120^\circ - 60^\circ = 60^\circ$ |
| (v) | $30^\circ + x = 80^\circ$ | \Rightarrow | $x = 80^\circ - 30^\circ = 50^\circ$ |
| (vi) | $x + 35^\circ = 75^\circ$ | \Rightarrow | $x = 75^\circ - 35^\circ = 40^\circ$ |