



MATHS

NCERT - NCERT Mathematics(English)

THE TRIANGLE AND ITS PROPERTIES

Exercise 6.3

1. Find the value of the unknown x in the following diagrams:



Watch Video Solution

2. Find the values of the unknowns x and y in the following diagrams



[Watch Video Solution](#)

Solved Examples

1. Determine whether the triangle whose lengths of sides are 3 cm, 4 cm, 5 cm is a right-

angled triangle.



[Watch Video Solution](#)

2. The lengths of two sides of a triangle are 6 cm and 8 cm. Between which two numbers can length of the third side fall?



[Watch Video Solution](#)

3. $\triangle ABC$ is right-angled at C . If $AC = 5\text{cm}$ and $BC = 12\text{cm}$ find the length

of AB .

A. 17

B. 7

C. 13

D. 14

Answer: C



Watch Video Solution

4. Find angle x in Fig 6.11.



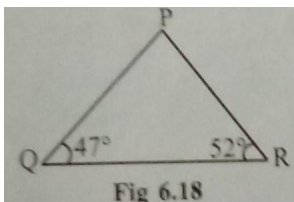
[Watch Video Solution](#)

5. Is there a triangle whose sides have lengths 10.2 cm, 5.8 cm and 4.5 cm?



[Watch Video Solution](#)

6. In the given figure (Fig 6.18) find $m\angle P$.



[Watch Video Solution](#)

Exercise 6 4

1. $ABCD$ is a quadrilateral. Is $AB + BC + CD + DA < 2(AC + BD)$?



[Watch Video Solution](#)

2. $ABCD$ is a quadrilateral. Is $AB + BC + CD + DA > AC + BD$?



[Watch Video Solution](#)

3. The lengths of two sides of a triangle are 12 cm and 15 cm. Between what two measures should the length of the third side fall?

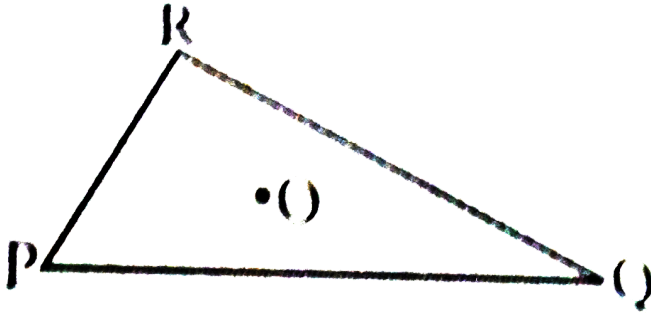


[Watch Video Solution](#)

4. Is there any triangle possible with the given sides ?

(i) 2cm , 3cm , 5cm (ii) 3cm , 6cm , 7cm (iii) 6cm ,

3cm, 2 cm`



Watch Video Solution

5. AM is a median of s triangle ABC . Is $AB + BC + CA > 2AM$? (Consider the sides of triangles $\triangle ABM$ and $\triangle AMC$.)



Watch Video Solution

6. Take any point O in the interior of a triangle

PQR . Is (i) $OP + OQ > PQ$? (ii)

$OQ + OR > QR$? (iii) $OR + OP > RP$?



Watch Video Solution

Exercise 6 5

1. A tree is broken at a height of 5 m from the ground and its top touches the ground at a

distance of 12 m from the base of the tree.

Find the original height of the tree

A. $17m$

B. $18m$

C. $16m$

D. $14m$

Answer: B



Watch Video Solution

2. Angles Q and R of a $\triangle PQR$ are 25° and 65° . Write which of the following is

true : (i) $PQ^2 + QR^2 = RP^2$ (ii)

$PQ^2 + RP^2 = QR^2$ (iii)

$RP^2 + QR^2 = PQ^2$



[Watch Video Solution](#)

3. Find the perimeter of the rectangle whose length is 40 cm and a diagonal is 41 cm.

A. 97cm

B. 89cm

C. 98cm

D. 88cm

Answer: C



Watch Video Solution

4. Which of the following can be the sides of a right triangle? (i) 2.5 cm, 6.5 cm, 6 cm. (ii) 2 cm, 2 cm, 5 cm. (iii) 1.5 cm, 2 cm, 2.5 cm. In the case of right-angled triangles, identify the right angles.



[Watch Video Solution](#)

5. ABC is a triangle right angled at C . If $AB = 25\text{cm}$ and $AC = 7\text{cm}$, find BC .



[Watch Video Solution](#)

6. A 15 m long ladder reached a window 12 m high from the ground on placing it against a wall at a distance a . Find the distance of the foot of the ladder from the wall.



Watch Video Solution

7. PQR is a triangle right angled at P. If $PQ = 10\text{cm}$ and $PR = 24\text{cm}$, find QR



Watch Video Solution

8. The diagonals of a rhombus measure 16 cm and 30 cm. Find its perimeter

A. 62cm

B. 65cm

C. 61cm

D. 68cm

Answer: D



Watch Video Solution

Exercise 6 1

1. In ΔPQR , D is the mid-point of \overline{QR} . then \overline{PM} is _____, PD is _____. Is $QM = MR$?



[Watch Video Solution](#)

Exercise 6 2

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



[Watch Video Solution](#)

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



Watch Video Solution