

THE TRIANGLE AND ITS PROPERTIES

Subtopic: TWO SPECIAL TRIANGLES: EQUILATERAL AND ISOSCELES, SUM OF THE LENGTHS OF TWO SIDES OF A TRIANGLE

Section 1

1. Mark T for True and F for False

1a. A triangle in which all the 3 sides are of equal length is called an isosceles triangle.

1b. A triangle in which two sides are of equal length is called an equilateral triangle.

2. Choose the correct answer.

2a. The sum of the lengths of any two sides of a triangle is,

- a) always smaller than the third side
- b) always greater than the third side
- c) always equal to the third side
- d) Can't say

2b. In what triangle are the base angles opposite to the two equal sides, equal?

- a) Equilateral triangle
- b) Isosceles triangle
- c) Scalene triangle
- d) Any obtuse angles triangle

3. Fill in the blanks

3a. The sides of a triangle have lengths 10 cm, 6.5 cm and 'a' cm where 'a' is a whole number. The minimum value that 'a' can take is _____.

3b. If two angles of a triangle is 60° each then the triangle is _____.

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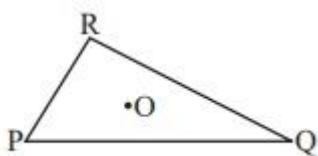
4. Complete the table.

Sides of a triangle	Write Triangle Possible or not
a) 2 cm, 3 cm, 5 cm	1)
b) 6cm, 3 cm, 2 cm	2)
c) 3 cm, 6 cm, 7 cm	3
d) 10.2cm, 5,8 cm, 4.5 cm	4)
e) 8 cm, 3 cm, 2 cm	5)

Section 2

5. 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?

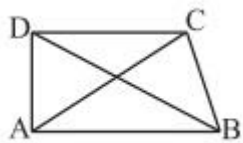
6. Take a point O in the interior of the triangle PQR as shown. Is $OR + OP > RP$? Why?



7. ABCD is a quadrilateral. In $AB + BC + CD + DA > AC + BD$? Why ?

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8. The lengths of 2 sides of a triangle are 12 cm and 15 cm. Between what two measures should the length of the third side fall?

Section 3

9. What can be the measure of the third side of a triangle whose two sides measure 18 cm and 14 cm?

10. With an example explain, if the sum of any two angles is always greater than the third angle.

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