NCERT SOLUTIONS FOR CLASS 6 MATHS
UNDERSTANDING ELEMENTARY SHAPES EX 5.6

**Q1.** Name the types of following triangles:

(a)Triangle with lengths of sides 7 cm, 8 cm and 9 cm.

(b)$\Delta ABC$ with AB = 8.7 cm, AC = 7 cm and BC = 6 cm.

(c)$\Delta PQR$ such that PQ = QR = PR = 5 cm.

(d)$\Delta DEF$ with m $\angle$m $\angle D = 90°90°$

(e)$\Delta XYZ$ with m $\angle$m $\angle Y = 90°90°$and XY = YZ

(f)$\Delta LMN$ with m $\angle$m $\angle L = 30°,30°$,m$\angle$m $\angle M = 70°70°$and m$\angle$m $\angle N = 80°.80°$.

**Ans:**

(a) Scalene triangle

(b) Scalene triangle

(c) Equilateral triangle

(d) Right-angled triangle

(e) Isosceles right-angled triangle

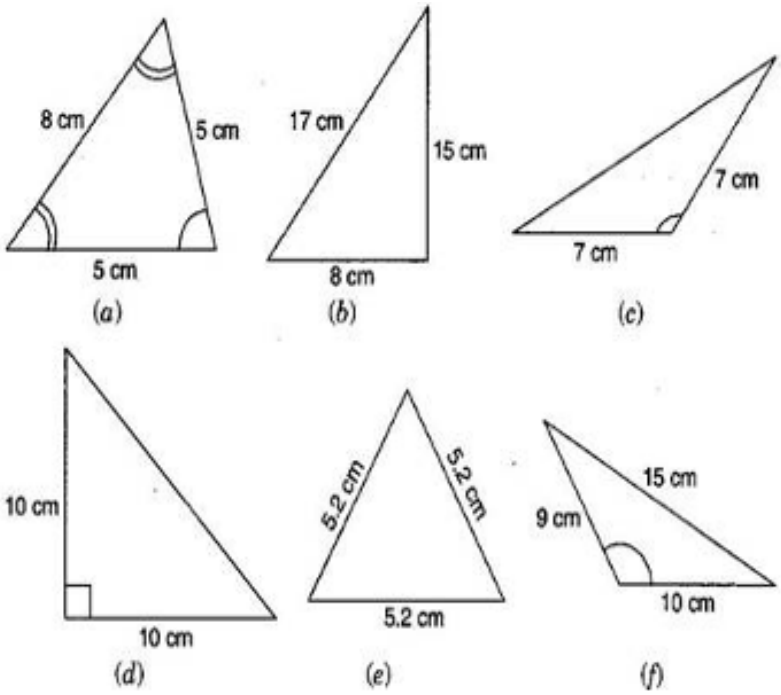
(f) Acute-angled triangle

**Q2.** Match the following:

| **Measure of Triangle** | **Types of Triangle** |
|---|---|
| (i)3 sides of equal length | (a) Scalene |
| (ii) 2 sides of equal length | (b) Isosceles right angle |
| (iii) All sides are of different length | (c) Obtuse angle |
| (iv) 3 acute angles | (d) Right angle |
| (v) 1 right angle | (e) Equilateral |
| (vi) 1 obtuse angle | (f) Acute angle |
| (vii) 1 right angle with two sides of equal length | (g) Isosceles |

**Ans:** (i)→(e), (ii)→(g), (iii)→(a), (iv)→(f), (v)→(d), (vi)→(c), (vii)→(b)

**Q3.** Name each of the following triangles in two different ways: (You may judge the nature of angle by observation)




**Ans:**

(a) Acute angled triangle and Isosceles triangle

(b) Right-angled triangle and Scalene triangle

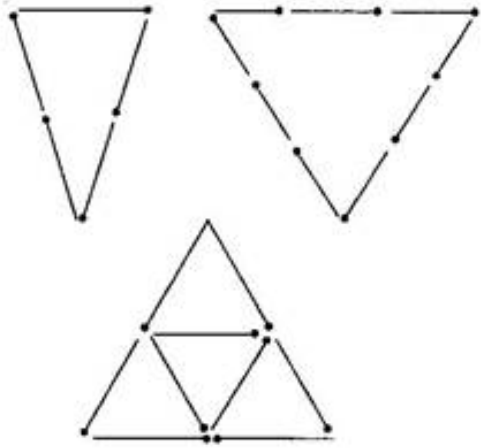
(c) Obtuse-angled triangle and Isosceles triangle

(d) Right-angled triangle and Isosceles triangle

(e) Equilateral triangle and acute angled triangle

(f) Obtuse-angled triangle and scalene triangle

**Q4.** Try to construct triangles using match sticks. Some are shown here.



Can you make a triangle with:

(a)3 matchsticks?

(b)4 matchsticks?

(c)5 matchsticks?

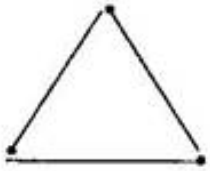
(d)6 matchsticks?

(Remember you have to use all the available matchsticks in each case)

If you cannot make a triangle, think of reasons for it.

**Ans:**
(a) 3 matchsticks

This is an acute angle triangle and it is possible with 3 matchsticks to make a triangle because sum of two sides is greater than third side.

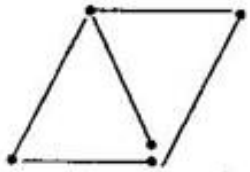


(b) 4 matchsticks

This is a square, hence with four matchsticks we cannot make triangle.

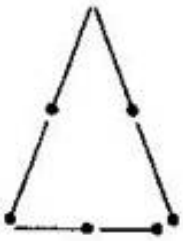
(c) 5 matchsticks

This is an acute angle triangle and it is possible to make triangle with five matchsticks, in this case sum of two sides is greater than third side.



(d) 6 matchsticks

This is an acute angle triangle and it is possible to make a triangle with the help of 6 matchsticks because sum of two sides is greater than third side.



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