Multiple Choice Question Type

1. Which of the following angle can be constructed with the help of a ruler and a pair of compasses?

(A) 35° (B) 40° (C) 37.5° (D) 47.5°

2. Which of the following can be the length of BC required to construct the triangle ABC such that AC = 7.4 cm and AB = 5 cm?

(A) 3.5 cm (B) 2.1 cm (C) 4.7 cm

3. The construction of a triangle ΔABC in which BC = 6 cm, ∠A = 50° is not possible, when difference of BC and AC is equal to

(A) 4.6 cm (B) 6.4 cm (C) 5.1 cm

4. The construction of the triangle ABC is possible if it is given that BC = 4 cm, ∠C = 60° and the difference of AB and AC is

(A) 3.5 cm (B) 4.5 cm (C) 3 cm (D) 2.5 cm

5. Which of the following set of lengths can be the sides of a triangle?

(A) 2 cm, 4 cm, 1.9 cm (B) 5.5 cm, 6.5 cm, 8.9 cm (C) 1.6 cm, 3.7 cm. 5.3 cm

6. Which of the following sets of angles can be the angles of a triangle?

(A) 30°, 60°, 80° (B) 40°, 60°, 70° (C) 50°, 30°, 100°

7. If the construction of a triangle ABC in which AB = 6 cm, ∠A = 70° and ∠B = 40° is possible then find the measure of ∠C.

(A) 40° (B) 70° (C) 80°

8. With the help of a ruler and compasses, which of the following is not possible to construct?

(A) 70° (B) 60° (C) 135°

9. With the help of a ruler and compasses which of the following is not possible to construct?

(A) 120° (B) 135° (C) 140°

10. If a, b and c are the lengths of the three sides of a triangle, then which of the following is true?

(A) a + b < c (B) a – b < c (C) a + b = c

Answers

1.	(iii)	2.	(ii)	3.	(ii)	4.	(ii)	5.	(ii)
6.	(iii)	7.	(ii)	8.	(i)	9.	(iii)	10.	(ii)

Long Answer Type

1. Construct an angle of 90° at the initial point of a given ray and juste the construction.
2. Construct an angle of 45° at the initial point of a given ray and juste the construction.
3. Construct an equilateral triangle, given its side and justify the construction.
4. Construct a triangle XYZ in which ∠Y = 30°, ∠Z = 90° and XY + YZ + ZX = 11 cm.
5. Construct a right triangle whose base is 12 cm and sum of its hypotenuse and other side is 18 cm.
6. How many measurements are required to construct a triangle?
7. Construct a ΔPQR in which PQ = 5.4 cm, ∠Q = 60° and PR – PQ = 2.3 cm.
8. Construct a ΔXYZ in which ∠Y = 45°, ∠Z = 75° and XY + YZ + ZX = 12 cm.
9. Construct a ΔABC in which ∠B = 60°, ∠C = 45° and the perimeter of the triangle is 10 cm.
10. Construct a ∠ABC with perimeter 11 cm and each of its base angle is 45°.
11. Construct a ∠PQR whose perimeter is 12 cm and the lengths of whose sides are in the ratio 2:3:4.
12. Construct a right-angled triangle whose be is 3.8 cm and hypotenuse is 5.6 cm.
13. Construct a ∠ABC in which ∠B = 60° ∠C = 30° and the length of the perpendicular from the vertex A is 5.3 cm.
14. Construct an equilateral triangle whose perimeter is 16.2 cm.
15. Construct a triangle ABC in which BC = 7.5 cm, ∠B = 45° and the difference between the other two sides is 4 cm.
16. Construct a ΔABC whose perimeter is 15 cm and sides are in the ratio 2: 3: 4.
17. Construct ΔABC, in which ∠B = 60° and ∠C = 45° and the perpendicular from the vertex A to the base BC is 5.2 cm.
18. Construct an equilateral triangle if its altitude is 6 cm.
    Give justification for your construction.
19. Construct a ΔABC in which BC = 5.5 cm, ∠B = 60° and sum of other two sides is 8.6 cm.
20. Construct a ΔABC in which BC = 6.4 cm, ∠B = 45° and the difference between the other two sides is 2.6 cm.
21. Construct a ΔABC in which BC = 7.2 cm, ∠B = 45° and AB – AC = 3.4 cm.