Q1. Construct ∠ABC equal to the angle ∠PQR given below. Are the two angles congruent?
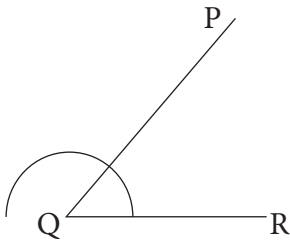
Q2. Which of the following angles cannot be constructed using compass?

a. 105°

b. 45°

c. 135°

d. 85°

Answer: _____

Q3. Construct an angle which is two-third of 180°.

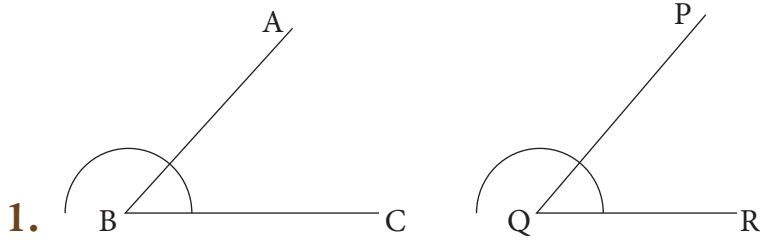**Q4.** Construct an isosceles triangle ABC with one equal side 3.5 cm and vertical angle 30°.

Q5. Construct an isosceles triangle ABC whose base is 3.5 cm and equal sides are 4 cm.

Q6. Construct a right-angled triangle whose hypotenuse PR = 10 cm, one side PQ = 6 cm.

Q7. The sides of a scalene triangle EFG measure 15%, 20% and 30% of the perimeter. If the perimeter of the triangle is 20 cm, find the measure of the sides and construct the triangle.

Q8. Construct an equilateral triangle DEF whose perimeter is 12.6 cm.

Q9. Construct an isosceles right-angled triangle ABC such that one of the equal sides is 4 cm. Also, construct a circle passing through all the three points A, B and C.

Q10. Construct a circle with radius OP = 3.8 cm, where O is the centre. Construct a tangent of 5.2 cm at P.

Answers

1.

A diagram showing angle ABC and angle PQR, both with arcs indicating equal angles.

Yes, the two angles are congruent.

2. (d)

3.

Diagram showing ∠ABC = 120° with ray BA, ray BC, and arc marked 120°.

∠ABC = 120°

4.

Triangle construction with A at top, B at lower left, C below. Sides BA = 3.5 cm, AC = 3.5 cm, angle 30° at A.

5.

Triangle ABC with A at top, arcs intersecting at A. Sides BA = 4 cm, AC = 4 cm, base BC = 3.5 cm.

6.

Right triangle PQR with P at top, right angle at Q, PQ = 6 cm, PR = 10 cm.

7.

E

4 cm

6 cm

F   3 cm   G

8.

P

4.2 cm   4.2 cm

E   4.2 cm   F

9.

A

4 cm

B   4 cm   C

10.

O 3.8 cm P

5.2 cm

Q