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Class: 9
Subject: Mathematics
Topic: Geometric constructions
No. of Questions: 20

Q1. To construct an angle equal to a given angle.

Q2. To bisect a given angle.

Q3. To Construct angles of 60°, 120° , 90°, 45°

Q4. To bisect a given line segment.

Q5. Divided a line segment AB of length 8 cm into 4 equal parts.

Q6. To draw a perpendicular bisector of a line segment.

Q7. To construct an equilateral triangle when one of its side is give.
E.g.: Construct and equilateral triangle whose each side is 5 cm.

Q8. To construct an equilateral triangle when its altitude is given.
E.G.: Construct an equilateral triangle whose altitude is 4 cm.

Q9. Construct of a triangle, given its Base, Sum of the other two sides and one Base Angle.
E.g. : Construct a triangle with base of length 5 cm, the sum of the other two sides 7 cm and one base angle of 60°

Q10. Construction of a triangle, given its Base, Difference of the Other Two Sides and one Base Angle.
E.g. : Construct a triangle with base of length 7.5 cm, the difference of the other two sides 2.5 cm, and one base angle of 45°

Q11. Construction of a triangle of given perimeter and base angles. Construct a triangle with perimeter 11.8 cm and base angles 60° and 45°

Q12. Construct a triangle ABC, in which $BC = 3.5$ cm, $\angle B = 30°$ and $AB+AC = 6.4$

Q13. Construct the angle of the 30 °.

Q14. Construct an equilateral triangle, given its sides 5 cm and justify the construction.

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Q15. Construct a right triangle when one side is 3.5 cm and the sum of the other side and hypotenuse is 5.5 cm

Q16. Construct a right triangle with perimeter 13 cm and one angle of 30°.

Q17. Construct an angle of 45° at the initial point of a given ray and justify the construction.

Q18. Construct a perpendicular bisector of a line segment of length 6 cm. Write the steps of construction and also justify your construction.

Q19. Construct a triangle ABC in which AB = 5.8 cm, BC+CA = 8.4 cm and ∠B = 60°. Justify your construction:

Q20. Construct an equilateral triangle if its altitude is 6 cm. Give justifications for your construction.