MATHS

NCERT - NCERT MATHEMATICS(TAMIL ENGLISH)

GEOMETRICAL CONSTRUCTIONS

Examples

1. Draw the perpendicular bisector of a given line segment AB and write justification.

Watch Video Solution

2. Construct the bisector of a given angle ABC.

Watch Video Solution

3. Draw a ray AB with initial point A and construct a ray AC such that $\angle BAC$ = 60°.

Watch Video Solution

4. Construct a $\triangle ABC$ given BC = 5 cm., AB + AC = 8 cm. and $\angle ABC = 60^\circ$.

Watch Video Solution

5. Construct ΔABC in which BC = 4.2 cm, $\angle B$ = 30° and AB − AC = 1.6 cm

Watch Video Solution

6. Construct $\triangle ABC$ in which BC = 5cm, $\angle B = 45^\circ$ and AC – AB = 1.8 cm.

Watch Video Solution

7. Construct a segment of a circle on a chord of length 7cm. and containing an angle of 60°.

Watch Video Solution

8. Draw the perpendicular bisector of a given line segment AB and write justification.

Watch Video Solution

9. Construct the bisector of a given angle ABC.

Watch Video Solution

10. Draw a ray AB with initial point A and construct a ray AC such that $\angle BAC$ = 60°.

Watch Video Solution

11. Construct a $\triangle ABC$ given BC = 5 cm., AB + AC = 8 cm. and $\angle ABC = 60^\circ$.

Watch Video Solution

12. Construct ΔABC in which BC = 4.2 cm, $\angle B$ = 30° and AB − AC = 1.6 cm

Watch Video Solution

13. Construct $\triangle ABC$ in which BC = 5cm, $\angle B = 45^\circ$ and AC – AB = 1.8 cm.

Watch Video Solution

14. Construct a triangle ABC, in which $\angle B = 60^\circ, \angle C = 45^\circ$ and AB + BC + CA = 11 cm.

Watch Video Solution

15. Construct a segment of a circle on a chord of length 7cm. and containing an angle of 60°.

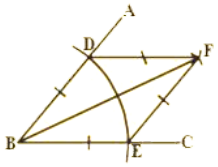
Watch Video Solution

Try This

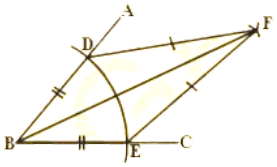
1. Observe the sides, angles and diagonals of quadrilateral BEFD. Name the figures given

below and write properties of figures.

1



2.



Watch Video Solution

2. Draw a circle, Identify a point on it. Cut arcs on the circle with the length of the radius in succession. How many parts can the circle be divided into? Give reason.

Watch Video Solution

3. What happen if the angle in the circle segment is right angle? What kind of segment do you obtain? Draw the figure and give reason.

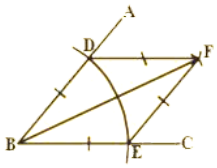
Watch Video Solution

4. Can you construct a triangle ABC with BC = 6 cm, $\angle B = 60^\circ$ and AB + AC = 5cm.? If not, give reasons.

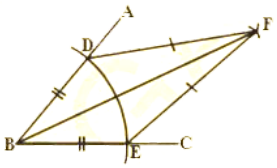
Watch Video Solution

5. Observe the sides, angles and diagonals of quadrilateral BEFD. Name the figures given below and write properties of figures.

1.



2.



Watch Video Solution

6. Draw a circle, Identify a point on it. Cut arcs on the circle with the length of the radius in

succession. How many parts can the circle be divided into? Give reason.

Watch Video Solution

7. What happen if the angle in the circle segment is right angle? What kind of segment do you obtain? Draw the figure and give reason.

Watch Video Solution

Exercise 13 1

1. Construct the following angles at the initial point of a given ray and justify the construction.

(a) 90° (b) 45°

Watch Video Solution

2. Construct an equilateral triangle, given its side of length of 4.5 cm and justify the construction.

Watch Video Solution

3. Construct an isosceles triangle, given its base and base angle and justify the construction.

Watch Video Solution

4. Construct the following angles at the initial point of a given ray and justify the

construction.

(a) 90° (b) 45°

Watch Video Solution

5. Construct an equilateral triangle, given its side of length of 4.5 cm and justify the construction.

Watch Video Solution

6. Construct an isosceles triangle, given its base and base angle and justify the construction.

Watch Video Solution

Exercise 13 2

1. Construct $\triangle ABC$ in which BC = 7 cm, $\angle B = 75^\circ$ and AB + AC = 12 cm.

Watch Video Solution

2. Construct $\triangle PQR$ in which QR = 8 cm, $\angle Q = 60^\circ$ and PQ – PR = 3.5 cm

Watch Video Solution

3. Construct $\triangle XYZ$ in which $\angle Y = 30^\circ$, $\angle Z = 60^\circ$ and XY + YZ + ZX = 10 cm.

Watch Video Solution

4. Construct a right triangle whose base is 7.5cm. and sum of its hypotenuse and other side is 15cm.

Watch Video Solution

5. Construct a segment of a circle on a chord of length 5cm. containing the following angles.

(i) 90° (ii) 45° (iii) 120°

Watch Video Solution

6. Construct $\triangle ABC$ in which BC = 7 cm, $\angle B = 75^\circ$ and AB + AC = 12 cm.

Watch Video Solution

7. Construct $\triangle PQR$ in which QR = 8 cm, $\angle Q = 60^\circ$ and PQ – PR = 3.5 cm

Watch Video Solution

8. Construct $\triangle XYZ$ in which $\angle Y = 30^\circ$, $\angle Z = 60^\circ$ and XY + YZ + ZX = 10 cm.

Watch Video Solution

9. Construct a right triangle whose base is 7.5cm. and sum of its hypotenuse and other side is 15cm.

Watch Video Solution

10. Construct a segment of a circle on a chord of length 5cm. containing the following angles.

(i) 90° (ii) 45° (iii) 120°

Watch Video Solution