



MATHS

NCERT - NCERT

MATHEMATICS(BENGALI ENGLISH)

GEOMETRICAL CONSTRUCTIONS

Examples

1. Draw the perpendicular bisector of a given line segment $AB=7\text{cm}$.



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2. Construct the bisector of a given angle

$$\angle ABC = 60^\circ.$$



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3. Draw a ray AB with initial point A and

construct a ray AC such that $\angle BAC = 60^\circ$.



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



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5. Construct $\triangle ABC$ in which $BC = 4.2$ cm, $\angle B = 30^\circ$ and $AB - AC = 1.6$ cm



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



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



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8. Draw the perpendicular bisector of a given line segment $AB=6\text{cm}$.



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Try This

1. Construct the bisector of a given angle $\angle ABC = 90^\circ$.



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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.



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3. Draw the perpendicular bisector of a given line segment $AB=8\text{cm}$.



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4. 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.



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5. Construct an equilateral triangle with side 7 cm.



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6. construct a triangle ABC with $BC = 6 \text{ cm}$,
 $\angle B = 60^\circ$ and $AB = 5 \text{ cm}$.



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Exercise 13 1

1. construct

90° by compass



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2. Construct the angle using ruler and compass and verify by measuring by a protractor.

30°



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3. Construct an equilateral triangle, given its side of length of 4.5 cm



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4. construct

45° by compass



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Exercise 13 2

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



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2. Construct $\triangle PQR$ in which $QR = 8$ cm,

$\angle Q = 60^\circ$ and $PR = 5$ cm



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3. Construct $\triangle XYZ$ in which $\angle Y = 30^\circ$,

$\angle Z = 60^\circ$ and $YZ = 10$ cm.



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



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