



MATHS

BOOKS - CBSE COMPLEMENTARY MATERIAL MATHS (HINGLISH)

CONSTRUCTIONS

Very Short Answer Type Questions

1. Construct a triangle similar to a given $\triangle ABC$ with its sides $\frac{5}{3}$ of the corresponding

sides of $\triangle ABC$, a ray BX is drawn such that $\angle CBX$ is an acute angle and X is on the opposite side of A with respect to BC . What is the minimum no. of points to be located at equal distances on ray BX .



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2. Draw a pair of tangents to a circle which are inclined to each other at an angle of 30° . What should be the angle between two radii?



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3. Construct a triangle similar to a given ΔABC with its sides $\frac{2}{5}$ of the corresponding sides of ΔABC , firstly a ray BX is drawn such that $\angle CBX$ is an acute angle and X lies on the opposite side of A with respect to BC then points B_1, B_2, B_3 . are located on BX at equal distances Which two points will be joined in the next step.



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4. Divide a line segment AB in the ratio 3:7,
What is the minimum number of points
marked on a ray AX at equal distances?



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5. How many tangents can be drawn from a
point lying inside a circle?



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6. Divide a line segment AB in the ratio 4:5, a ray AX is drawn first such that $\angle BAX$ is an acute angle and then points A_1, A_2, A_3, \dots are located at equal distances on the ray AX which should be joined to B?



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7. Divide a line segment AB in the ratio 4:5, the points A_1, A_2, A_3, \dots and B_1, B_2, B_3, \dots are located at equal distances on the ray AX and

BY respectively. Which two points should be joined to divide a line segment?



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8. Draw a line segment of length 6 cm. Find a point P on it which divides it in the ratio 3 : 4.



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9. Draw a line segment of length 8 cm and divides it in the ratio 2 : 3



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10. Is it possible to divide a line segment in the ratio $\sqrt{5} : \frac{1}{\sqrt{5}}$ by geometrical construction?



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11. Draw a line segment of length 7.6 cm and divide it in the ratio 3 : 2.



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12. By geometrical construction, it is possible to divide a line segment in the ratio $\sqrt{3} : \frac{1}{\sqrt{3}}$.



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13. Is it possible to construct a pair of tangents from point P to circle of radius 5 cm situated at a distance of 4.9 cm from the centre?



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14. Is it possible to construct a pair of tangents from point A lying on the circle of radius 4 cm and centre O.



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15. Compare the length of the tangents drawn from the external point to circle.



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Long Answer Type Questions

1. AB is a line segment of length 8 cm. Locate a point C on AB such that $AC = \frac{1}{3}CB$.



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2. Draw a pair of tangents to a circle of radius 6 cm which are inclined to each other at an angle of 60° . Also justify the construction.



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3. Draw a circle of radius 3 cm. From a point 5 cm from the centre of the circle, draw two tangents to the circle. Measure the length of each tangent.



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4. Draw a circle of radius 4 cm with centre O. Draw a diameter POQ. Through P or Q draw a tangent to the circle.



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5. Draw two circles of radii 5 cm and 3 cm with their centres 9 cm apart. From the centre of each circle, draw tangents to the other circle.



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6. Draw two circles of radii 6 cm and 4 cm. From a point on the outer circle, draw a tangent to the inner circle and measure its length.



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7. Draw a circle of radius 3 cm. Take two points P and Q on one of its extended diameter each at a distance of 7 cm from its centre. Draw tangents to the circle from these two points P and Q.



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8. Draw a line segment $PQ = 10$ cm. Take a point A on PQ such that $\frac{PA}{PQ} = \frac{2}{5}$ Measure

the length of PA and AQ



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9. Draw a line segment of length 8 cm and divide it in the ratio 5:8. Measure the two parts.



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Practice Test Section A

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



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2. Draw a line parallel to a given line.



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3. Draw the tangent to a circle of diameter 4 cm at a point P on it.



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4. Draw two tangents to a circle of radius 4 cm from a point T at a distance of 6 cm from its centre.



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Practice Test Section B

1. Draw a pair of tangent to a circle of radius 5 cm which are inclined to each other at an angle of 60° . Give steps of construction.



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2. Draw an angle bisector of 75° .



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3. Draw a line segment of 5.6cm. Divide it in the ratio 2:3.



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Practice Test Section C

1. Draw two tangents to a circle of radius 3.5cm from a point P at a distance of 5.5cm from its centre. Measure its length.



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