



MATHS

BOOKS - SWAN PUBLICATION

CONSTRUCTIONS

Exercise 11 1

1. Draw a line segment of length 7.6 cm and divide it in the ratio 5:8. Measure the two parts.



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2. Construct a triangle of sides 4cm, 5cm and 6cm and then a triangle similar to it whose sides are $\frac{2}{3}$ of the corresponding sides of it.



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3. In each of the following give the justification of the construction also :

Construct a triangle with sides 5cm, 6cm and

7cm and then another triangle whose sides are $\frac{7}{5}$ of the corresponding sides of the first triangle.



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4. Construct an isosceles triangle whose base 8cm and altitude 4cm and then another triangle whose sides are $1\frac{1}{2}$ times the corresponding side of the isosceles triangle.



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5. Draw a triangle ABC with sides $BC = 6\text{cm}$, $AB = 5\text{cm}$ and $\angle ABC = 60^\circ$. Then construct a triangle whose sides are $\frac{3}{4}$ of the corresponding sides of the triangle ABC .



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6. Draw a triangle ABC with side $BC=7\text{cm}$, $\angle B = 45^\circ$, $\angle A = 105^\circ$. Then construct a triangle whose side are $\frac{4}{3}$ times the corresponding sides of $\triangle ABC$.



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7. Draw a right triangle in which the sides (other than hypotenuse) are of lengths 4cm and 3cm. Then construct another triangle whose sides are $\frac{5}{3}$ times the corresponding sides of the given triangle.



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Exercise 11 2

1. Draw a circle of radius 6cm. From a point 10 cm away from its centre, construct the pair of tangents to the circle and measure their lengths.



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2. Construct a tangent to a circle of radius 4 cm from a point on the concentric circle of radius 6 cm and measure its length. Also, verify the measurement by actual calculation.





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



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4. Draw a pair of tangents to a circle of radius 5cm which are inclined to each other at an angle of 60°



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5. Draw a line segment AB of length 8cm . Taking A as centre, draw a circle of radius 4cm and taking B as centre, draw another circle of radius 3cm . Construct tangents to each circle from the centre of the other circle.



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6. Draw a circle of radius 3 cm. Take a point outside the circle. Construct the pair of tangents from this point to the circle.



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