



MATHS

BOOKS - RD SHARMA MATHS (ENGLISH)

CONSTRUCTIONS

Others

1. Divide a line segment of length 10cm internally in the ratio 3:2



[Watch Video Solution](#)

2. Divide a line segment of length 8cm internally in the ratio 3:4.



[Watch Video Solution](#)

3. Divide a line segment of length 9cm internally in the ratio 4:3. Also, give justification of the construction.



[Watch Video Solution](#)

4. Divide a line segment of length 14cm internally in the ratio 2:5 . Also, justify your construction.



[Watch Video Solution](#)

5. Construct a $\triangle ABC$ in which $AB = 4cm$, $BC = 5cm$ and $AC = 6cm$. Now, construct a triangle similar to $\triangle ABC$ such that each of its sides is two-third of the corresponding sides of $\triangle ABC$. Also, prove your assertion.



[Watch Video Solution](#)

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



[Watch Video Solution](#)

7. Construct a triangle of sides 4cm, 5cm and
6cm and then a triangle similar to it whose

sides are $(2/3)$ of the corresponding sides of it.



[Watch Video Solution](#)

8. Construct a triangle similar to a given ABC such that each of its sides is $(5/7)^{th}$ of the corresponding sides of ABC . It is given that $AB = 5cm$, $BC = 7cm$ and $\angle ABC = 50^\circ$



[Watch Video Solution](#)

9. Construct a triangle similar to a given ABC such that each of its sides is $(2/3)^{rd}$ of the corresponding sides of ABC . It is given that $BC = 6cm$, $\angle B = 50^\circ$ and $\angle C = 60^\circ$



[Watch Video Solution](#)

10. Draw a ABC in which $BC = 6cm$, $AB = 4cm$ and $AC = 5cm$. Draw a triangle similar to ABC with its sides equal to $(3/4)^{th}$ of the corresponding sides of ABC .





[Watch Video Solution](#)

11. 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.



[Watch Video Solution](#)

12. Draw a right triangle ABC in which $AC = AB = 4.5\text{cm}$ and $\angle A = 90^\circ$. Draw a

triangle similar to ABC with its sides equal to $(5/4)^{th}$ of the corresponding sides of ABC .



[Watch Video Solution](#)

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



[Watch Video Solution](#)

14. Construct a ABC in which $AB = 5\text{cm}$.
 $\angle B = 60^\circ$ altitude $CD = 3\text{cm}$. Construct a
 AQR similar to ABC such that side of AQR
is 1.5 times that of the corresponding sides of
 ACB .



Watch Video Solution

15. Construct an isosceles triangle whose base
is 8cm and altitude 4cm and then another
triangle whose sides are $3/2$ times the
corresponding sides of the isosceles triangle.



[Watch Video Solution](#)

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



[Watch Video Solution](#)

17. Draw a right triangle in which sides (other
than the hypotenuse) are of lengths 8cm and

6cm. Then construct another triangle whose sides are $\frac{3}{4}$ times the corresponding sides of the first triangle.



[Watch Video Solution](#)

18. Construct a triangle with sides 5cm, 5.5cm and 6.5cm. Now construct another triangle, whose sides are $\frac{3}{5}$ times the corresponding sides of the given triangle.



[Watch Video Solution](#)

19. Construct a triangle PQR with side $QR = 7\text{cm}$, $PQ = 6\text{cm}$ and $\angle PQR = 60^\circ$.

Then construct another triangle whose sides are $\frac{3}{5}$ of the corresponding sides of PQR .



[Watch Video Solution](#)

20. Take a point O on the plane of the paper.

With O as centre draw a circle of radius 3 cm.

Take a point P on this circle and draw a tangent at P .



[Watch Video Solution](#)

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



Watch Video Solution

22. Draw a circle of radius 4 cm. Take a point P
on it. Without using the centre of the circle,
draw a tangent to the circle at point P .



Watch Video Solution

23. Draw a circle of radius 3cm. Take a point at a distance of 5.5cm from the centre of the circle. From point P , draw two tangents to the circle.



Watch Video Solution

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



[Watch Video Solution](#)

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



[Watch Video Solution](#)

26. Draw a circle of radius 4 cm. Take a point P outside the circle. Without using the centre of

the circle, draw two tangents to the circle from point P.



[Watch Video Solution](#)

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



[Watch Video Solution](#)

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



Watch Video Solution

29. Draw a line segment AB of length 8cm. Taking A as centre, draw a circle of radius 4 cm and taking B as centre, draw another circle

of radius 3 cm. Construct tangents to each circle from the centre of the other circle.



[Watch Video Solution](#)

30. Draw a pair of tangents to a circle of radius 4.5 cm, which are inclined to each other at an angle of 45°



[Watch Video Solution](#)

31. Draw two tangents to a circle of radius 3.5 cm from a point P at a distance of 6.2 cm from its centre.



[Watch Video Solution](#)

32. Let ABC is a right triangle in which $AB = 6$ cm, $BC = 8$ cm, $\angle B = 90^\circ$. BD is the perpendicular from B on AC . The circle through B, C and D is drawn. Construct the tangents from A to this circle.





[Watch Video Solution](#)