



# MATHS

# **BOOKS - MBD**

# PRACTICAL GEOMETRY



## **1.** Draw a circle of radius 3.2 cm.

2. With the same centre O ,draw two circles of

radii 4 cm and 2.5 cm.

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**3.** Draw a circle and any two of its diameter. If you join the ends of thes diameters, what is the figure obtained? What figure is obtained if the diameters are perpendicular to each others? How do you check your answer?



**4.** Draw any circle and mark points A,B and C such that

A is on the circle. B is in the interior of circle.C

is in the exterior of circle.

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5. Draw any circle and mark points A,B and C

such that

B is in the interior of the circle.

**6.** Draw any circle and mark points A,B and C such that

C is the exterior of the circle.

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**7.** Let A,B be the centres of two circles of equal radii,draw them so that each one of them passes through the centre of the other.Let

them intersect at C and D.Examine therther

 $\overline{A}B$  and  $\overline{C}D$  are at right angles.



**8.** Given  $\overline{A}B$  of length 3.9 cm, construct  $\overline{P}Q$  such that the length of  $\overline{P}Q$  is twice that of  $\overline{A}B$ . Verify by measurement.



**9.** Given  $\overline{AB}$  of length 7.3 cm and  $\overline{CD}$  of length of 3.4 cm, construct  $\overline{XY}$  such that the length of  $\overline{XY}$  is twice that of  $\overline{AB}$  and  $\overline{CD}$ . Verify by measurement.

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**10.** Draw any line segment  $\overline{P}Q$ .Without measuring  $\overline{P}Q$ ,construct a copy of  $\overline{P}Q$ .

**11.** Given same line segment $\overline{A}B$ ,whoe length is not known.Construct  $\overline{P}Q$  such that the length of  $\overline{P}Q$  is twice that of  $\overline{A}B$ .

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**12.** Draw any line segment  $\overline{A}B$ .Mark any piont

M on it.Through M draw a perpendicular to

 $\overline{A}B$ .(use ruler and compass).

**13.** Draw any line segment  $\overline{P}Q$  .Take any point R not on it.Through R draw a perpendicular to  $\overline{P}Q$ .

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**14.** Draw a line I and a pont x on it.Threough x , draw a line segment  $\overline{X}Y$  perpendicular to I.

NOw draw a perpendicular to  $\overline{X}Y$  at Y,

15. Draw  $\overline{A}B$  of length 7.3 cm and find its axis

of symmetry.

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16. Draw a ilne segment of length 9.5 cm and

construct its perpendicular bisector.

17. Draw the perpendicular bisector of  $\overline{X}Y$ whose length is 10.3 cm Take any point P on the bisector drawn.Examine whether PX=PY. Watch Video Solution

**18.** If M is the mid point of XY, what can you

say about the lengths MX and XY?

19. Draw a line segment of length 11.4 cm,

using a ruler.



20. With PQ of length 6.1 cm as diameter, draw

a circle.

**21.** Draw a circle with centre C and radius 3.4 cm.Draw any chord  $\overline{A}B$ .Construct the perpendicular bisector of  $\overline{A}B$  and examine if it passes through C.

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22. Repeat Qestiobn 6, if  $\overline{A}B$  happens to be a

diameter.

**23.** Draw a circle of radius 4 cm.Draw any two of its chords.Construct the perpendicular bisectors of these chords.Where do they meet?



**24.** Draw any angle with vertex O .Take a pont A

on one of its arms and B on any another such

that OA=OB.Draw the perpendicular bisectors

of  $\overline{O}A$  and  $\overline{O}B$ .Let them meet at P.Is PA=PB?



**25.** Draw  $\angle(POQ)$  of measure  $75^{\circ}$  and find its

line of symetery.

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# **26.** Draw an angle of measure $147^{\circ}$ and

construct its bbisector.

**27.** Draw a right angle and construct its bisector.

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**28.** Draw an angle of measure  $153^{\,\circ}\,$  and divide

it into four equal parts.

29. Construct with ruler and compass angles

of following meaures:

 $60^{\circ}$ 



**30.** Construct the angles of the following measurement  $30^{\circ}$ .

31. Construct with ruler and compass angles of

following meaures:

 $90^{\,\circ}$ 



## 32. Construct with ruler and compass angles

of following meaures:

 $120^{\circ}$ 

33. Construct with ruler and compass angles

of following meaures:

 $45^{\,\circ}$ 



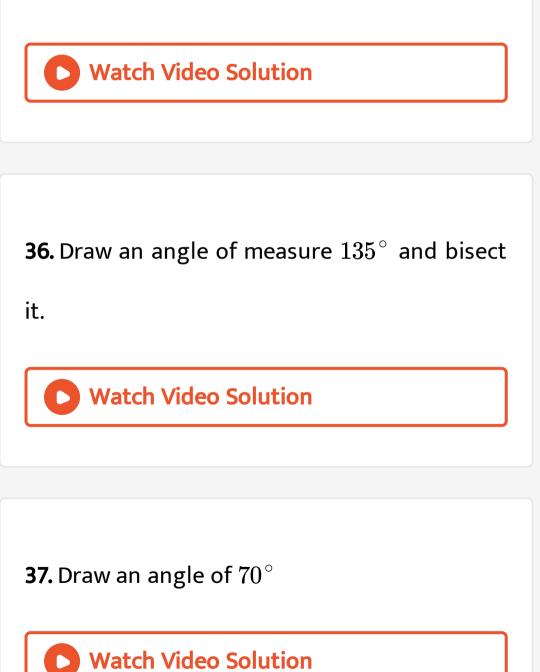
## 34. Construct with ruler and compass angles

of following meaures:

 $135\,^\circ$  .

35. Draw an angle of measure  $45^{\circ}$  and bisect

#### it.



**38.** Draw an angle of  $40^{\circ}$ .Copy its

supplementary angle.

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**1.** Draw a circle of radius 4 cm.

2. Draw a line segment of length 7.3 cm using a

ruler.

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3. Construct a line segment of length 5.6 cm

using ruler and compasses.

**4.** Construct  $\overline{A}B$  of length 7.8 cm .From this

cut off  $\overline{A}C$  of length 4.7 cm.Measure  $\overline{B}C$ .

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**5.** Draw a line segment of length 11.4 cm, using a ruler.

6. Construct the line segments of the following lengths ,using compasses:6.4 cm

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7. Construct the line segments of the following

lengths ,using compasses:

4.7 cm

8. If AB = 4.5 cm and CD = 3 cm .Construct a line

segment whose length is equal to

2 AB



## 9. If AB = 4.5 cm and CD = 3 cm .Construct a line

segment whose length is equal to

3CD

10. If AB = 4.5 cm and CD = 3 cm .Construct a

line segment whose length is equal to

AB+2CD

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## 11. If AB = 4.5 cm and CD = 3 cm .Construct a

#### line segment whose length is equal to

AB-CD

12. If AB = 4.5 cm and CD = 3 cm .Construct aline segment whose length is equal to2 CD-AB.



13. Given AB=5.8 cm and CD = 2.5 cm, construct

a line segment whose length is equal to the

difference of lengths of line segments AB and

CD.



**14.** Draw any line segment $\overline{A}B$  without measuring  $\overline{A}B$  consturct a copy of  $\overline{A}B$ .

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**15.** Given  $\overline{A}B$  a line segment whose length = 5 cm,construct  $\overline{P}Q$  such that the length of  $\overline{P}Q$  is twice that of  $\overline{A}B$ .

**16.** Draw a lineAB.Mark a point C on it.Draw a line CD perpendicular to AB, using ruler and compasses.

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**17.** Draw a line segment AB of length 7 cm.Mark a point P on AB such that AP=2 cm.Draw a line through P perpendicular to the line segment AB.



18. Draw a line I ,also draw a line m parallel to I

at a distance of 4 cm.



**19.** Draw a line AB.Take a point C outside it .Through C draw a line parallel to AB,using ruler and compass.

**20.** Draw  $\overline{P}Q$  of length 5.9 cm and find its axis

symmetry.

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**21.** Draw a line segment of length 5cm.Construct the perpendicular bisector of this line segment.

**22.** Draw a circle of any radius.Draw its two chords such that AB is parallel to Cd.Draw the Perpendicular bisector of line segment AB and

CD.

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23. Draw a line segment Ab and obtain a line

segment of length

$$\frac{1}{4}AB$$

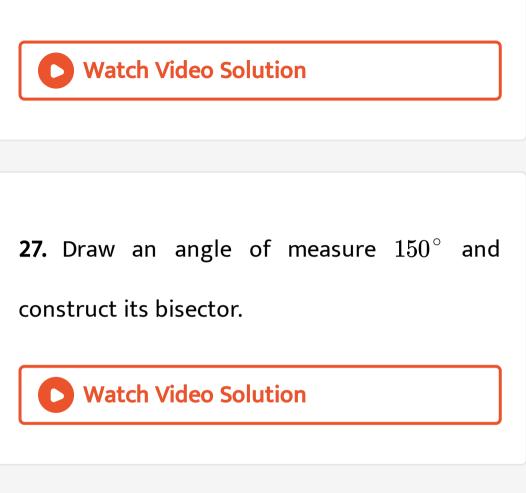
**24.** If A and B are (- 2,- 2) and (2,- 4) respectively, find the coordinates of P such that AP=3/4 AB`. AB and P lies in the line segment AB



25. With  $\overline{A}B$  of length 3.4 cm as diameter

draw a circle.

**26.** Draw  $\angle(AOB)$  of measure  $15^{\circ}$ 



**28.** Draw an acute angle i.e.  $60^{\circ}$  and construct

its bisector.



**29.** Construct with ruler and compass angles of following measures:

 $75^{\,\circ}$ 

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# 30. Construct with ruler and compass angles

of following measures:

 $75^{\,\circ}$ 

**31.** Construct the angles of the following measurement  $22\frac{1_{\circ}}{2}$ .

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32. Draw an angle of measure  $45^{\circ}$  and bisect

it.

