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## MATHS

## BOOKS - RD SHARMA MATHS (ENGLISH)

## CONSTRUCTIONS

## Others

1. Draw an $\angle B A C$ of measure $50^{\circ}$ such that
$A B=5 \mathrm{~cm}$ and $A C=7 \mathrm{~cm}$. Through $C$
draw a line parallel to $A B$ and through $B$
draw a line parallel to AC, intersecting each other at $D$. Measure $B D$ and $C D$.

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2. Draw a line $P Q$. Draw another line parallel to $P Q$ at a distance of 3 cm from it.

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3. Take any three non-collinear points $A, B, C$ and draw $A B C$. Through each vertex of the triangle, draw a line parallel to the opposite side.

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4. Draw two parallel lines at a distance 5 cm apart.
5. Construct a triangle $A B C$ if the lengths of
its sides are given by
$A B=6 \mathrm{~cm}, B C=7 \mathrm{~cm}$ and $A C=5 \mathrm{~cm}$.

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$$
\begin{aligned}
& \text { 6. Draw } A B C \quad \text { in } \\
& A B=4.5 \mathrm{~cm}, B C=5 \mathrm{~cm} \text { and } C A=6 \mathrm{~cm} .
\end{aligned}
$$

Also, draw the perpendicular bisector of $B C$.
7. Draw $A B C$ in which $A B=5 \mathrm{~cm}$.
$B C=6 \mathrm{~cm}$ and $C A=7 \mathrm{~cm}$. Also, draw perpendicular bisector of side $B C$.

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8. Draw $P Q R$ in which $P Q=3 \mathrm{~cm}$,
$Q R=4 \mathrm{~cm}$ and $R P=5 \mathrm{~cm}$. Also, draw the bisector of $\angle Q$.

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9. Draw an equilateral triangle one of whose sides is of length 7 cm .

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10. Draw a triangle whose sides are of lengths
$4 \mathrm{~cm}, 5 \mathrm{~cm}$ and 7 cm . Draw the perpendicular bisector of the largest side.

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11. Draw a triangle $A B C$ with
$A B=6 \mathrm{~cm}, B C=7 \mathrm{~cm}$ and $C A=8 \mathrm{~cm}$.

Using ruler and compass alone, draw (i) the bisector $A D$ of $\angle A$ and (ii) perpendicular $A L$ from $A$ on $B C$. Measure $L A D$.

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12. Draw $D E F$ such that $D E=D F=4 \mathrm{~cm}$ and $E F=6 \mathrm{~cm}$. Measure $\angle E$ and $\angle F$.
13. Draw any triangle $A B C$. Bisect side $A B$ at $D$. Through $D$, draw a line parallel to $B C$, meeting $A C$ in $E$. Measure $A E$ and $E C$.

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> 14. Construct $A B C \quad$ in which
> $\angle B=60^{\circ}, A B=5 \mathrm{~cm}$ and $B C=6 \mathrm{~cm}$.
15. Draw a triangle $A B C$ with
$B C=3.2 \mathrm{~cm}, \quad A B=3.6 \mathrm{~cm}$ and
$\angle B=120^{\circ}$. Also draw a perpendicular from
$A$ on $B C$.

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16. Draw $A B C$ in which $A B=3 \mathrm{~cm}$,
$B C=5 \mathrm{~cm}$ and $\angle B=70^{\circ}$.

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17. Draw $A B C$ in which $\angle A=70^{\circ}$,
$A B=4 \mathrm{~cm}$ and $A C=6 \mathrm{~cm}$. Measure $B C$.

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18. Draw an isosceles triangle in which each of
the equal sides is of length 3 cm and the angle between them is $45^{\circ}$.

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# 19. <br> Draw <br> $A B C$ <br> in <br> which 

$\angle A=120^{\circ}, A B=A C=3 \mathrm{~cm}$.
Measure
$\angle B$ and $\angle C$.

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20. Draw $A B C$ in which $\angle C=90^{\circ}$ and
$A C=B C=4 \mathrm{~cm}$.

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21. Draw a triangle $A B C$ in which
$B C=4 \mathrm{~cm}, A B=3 \mathrm{~cm} \quad$ and $\quad \angle B=45^{\circ}$.

Also, draw a perpendicular from $A$ on $B C$.

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22. Draw a triangle $A B C$ with $A B=3 \mathrm{~cm}$,
$B C=4 \mathrm{~cm}$ and $\angle B=60^{\circ}$. Also, draw the bisector of angles $C$ and $A$ of the triangle, meeting in a point $O$. Measure $\angle C O A$.
23. draw $A B C \quad$ in
$B C=6 \mathrm{~cm}, \angle B=35^{0}$ and $\angle C=100^{\circ}$.

Measure $\angle A$.

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24. Draw a triangle $A B C$ in which
$B C=5.2 \mathrm{~cm}, \angle B=60^{\circ}$ and $\angle A=100^{\circ}$.

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25. Construct $A B C$ in which
$B C=4 \mathrm{~cm}, \angle B=50^{\circ}$ and $\angle C=70^{\circ}$.

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26. Draw $A B C$ in which
$B C=8 \mathrm{~cm}, \angle B=50^{\circ}$ and $\angle A=50^{\circ}$.

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27. Draw $P Q R$ in which $\angle Q=80^{\circ}, \angle R=55^{\circ}$
and $Q R=4.5 \mathrm{~cm}$. Draw the perpendicular
bisector of side $Q R$.

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28. Construct $A B C$ in which
$A B=6.4 \mathrm{~cm}, \angle A=45^{\circ}$ and $\angle B=60^{0}$.

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29. Draw $A B C$ in which
$A C=6 \mathrm{~cm}, \angle A=90^{\circ}$ and $\angle B=60^{\circ}$.

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30. Draw triangle $A B C$ with $\angle C$ a right angle,
$A B=6.2 \mathrm{~cm}$ and $B C=4.5 \mathrm{~cm}$.

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31. Draw a right triangle having hypotenuse of
length 5.4 cm , and one of the acute angles of measure $60^{0}$.

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32. Draw a right triangle with hypotenuse of length 5 cm and one side of length 4 cm .

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33. Draw a right triangle whose hypotenuse is
of length 4 cm and one side is of length
2.5 cm .

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34. Draw a right triangle having hypotenuse of length 5.4 cm , and one of the acute angles of measure $30^{0}$.

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35. Construct a right triangle $A B C$ in which
$A B=5.8 \mathrm{~cm}, \quad B C=4.5 \mathrm{~cm} \quad$ and
$\angle C=90^{\circ}$.
36. Construct a right triangle, right angled at
$C \quad$ in $\quad$ which $\quad A B=5.2 \backslash \mathrm{~cm} \quad$ and
$B C=4.6 \mathrm{~cm}$.

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