



MATHS

BOOKS - RD SHARMA MATHS (ENGLISH)

CONSTRUCTION

Others

1. Draw line segment of length 6.6 cm . Bisect it and measure the length of each part.



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2. Draw a line segment PQ length 8.4 cm . Draw the perpendicular bisector of this line segment.



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3. Draw a line segment of length 8.6 cm . Bisect it and measure the length of each part.



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4. Draw a line segment AB of length 5.8 cm . Draw the perpendicular bisector of this line segment.





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5. Draw a circle with centre at point O and radius 5 cm. Draw its chord AB , draw the perpendicular bisector of line segment AB . Does it pass through the centre of the circle?



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6. Draw a circle with centre at point O . Draw its two chords AB and CD such that AB is not parallel to CD . Draw the perpendicular bisector of AB and CD . At what point do they intersect?



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7. Draw a line segment of length 10cm and bisect it. Further bisect one of the equal parts and measure its length.



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8. Draw a line segment AB and bisect it. Bisect one of the equal parts to obtain a line segment of length $\frac{1}{4}(AB)$



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9. Draw a line segment AB and by ruler and compasses, obtain a line segment of length $\frac{3}{4}(AB)$



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10. Using a protractor, draw an angle of measure 72° . With this angle as given, draw an angle of measure 36° .



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11. Using a protractor, draw an angle of measure 128° . With this angle as given, draw an angle of measure 96° .



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12. Draw an angle and label it as $\angle BAC$. Construct another angle, equal to $\angle BAC$.



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13. Draw an obtuse angle. Bisect it. Measure each of the angles so obtained.



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14. Using your protractor, draw an angle of measure 108° . With this angle as given, draw an angle of 54° .



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15. Using protractor, draw a right angle. Bisect it to get an angle of measure 45° .



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16. Draw a linear pair of angles. Bisect each of the two angles. Verify that the two bisecting rays are perpendicular to each other.



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17. Draw a pair of vertically opposite angles. Bisect each of the two angles. Verify that the bisecting rays are in the same line.



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18. Using ruler and compasses only, draw a right angle.



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19. Using ruler and compasses only, draw an angle of measure 135°



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20. Using a protractor, draw an angle of measure 72° . With this angle as given, draw angles of measure 36° and 54° .



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21. Construct the following angles at the initial point of a given ray and justify the construction: (i) 45° (ii) 90°



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22. Construct the angles of the following measurements: 30° (ii) 75° (iii) 105°



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23. Construct the angles of the following measurements: 135° (ii) 15° (iii) $22\frac{1}{2}^{\circ}$



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24. Construct a triangle ABC in which $AB = 5.8\text{ cm}$, $BC + CA = 8.4\text{ cm}$ and $\angle B = 60^{\circ}$



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25. Construct a triangle ABC , in which $BC = 3.8\text{ cm}$, $\angle B = 45^{\circ}$ and $AB + AC = 6.8\text{ cm}$.



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26. Construct a right triangle whose base is 12cm and sum of its hypotenuse and other side is 18cm



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27. Construct a triangle ABC in which base $AB = 5\text{cm}$, $\angle A = 30^\circ$ and $AC - BC = 2.5\text{cm}$.



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28. Construct a triangle ABC in which $BC = 5.7 \text{ cm}$, $\angle B = 45^\circ$, $AB - AC = 3 \text{ cm}$



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29. Construct a ABC in which $BC = 5.6 \text{ cm}$, $AC - AB = 1.6 \text{ cm}$ and $\angle B = 45^\circ$.

Justify your construction.



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30. Construct a triangle PQR whose perimeter is equal to 14cm , $\angle p = 45^\circ$ and $\angle q = 60^\circ$



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31. Construct a ABC in which $BC = 3.6\text{ cm}$, $AB + AC = 4.8\text{ cm}$ and $\angle C = 60^\circ$



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32. Construct a ABC in which $AB + AC = 5.6\text{ cm}$, $BC = 4.5\text{ cm}$ and $\angle B = 45^\circ$





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33. Construct a $\triangle ABC$ in which
 $BC = 3.4 \text{ cm}$, $AB - AC = 1.5 \text{ cm}$ and $\angle B = 45^\circ$



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34. Using ruler and compasses only, construct a
 $\triangle ABC$, given base
 $BC = 7 \text{ cm}$, $\angle ABC = 60^\circ$ and $AB + AC = 12 \text{ cm}$



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35. Construct a triangle whose perimeter is 6.4 cm , and angles at the base are 60° and 45° .



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36. Using ruler and compasses only, construct a ABC from the following data:

$$AB + BC + CA = 12\text{cm}, \angle B = 45^\circ \text{ and } \angle C = 60^\circ$$



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37. Construct a right-angled triangle whose perimeter is equal to 10cm and one acute angle

equal to 60° .



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38. Construct a triangle ABC such that $BC = 6\text{ cm}$, $AB = 6\text{ cm}$ and median $AD = 4\text{ cm}$.



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39. Construct a right triangle ABC whose base BC is 6 cm and the sum of hypotenuse AC and other side AB is 10 cm



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40. Construct a triangle XYZ in which $\angle Y = 30^\circ$, $\angle Z = 90^\circ$ and $XY + YZ + ZX = 11\text{cm}$



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