



MATHS

BOOKS - MBD

Constructions

Exercise

1. Construct an angle of 45° at the initial point of a given ray and justify the construction.



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2. Construct the angles of the following measurement 30° .



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3. Construct the angles of the following measurement $22\frac{1}{2}^\circ$.



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4. Construct the angles of the following measurement 15° .



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5. Construct an equilateral triangle, given its side and justify the construction.



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6. Using ruler and compasses, construct the following angles and justify your construction

: 120°



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7. Using ruler and compasses, construct the following angles and justify your construction

: 150°



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8. Using ruler and compasses, construct the following angles and justify your construction

: 165°



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9. Using ruler and compasses, construct the following angles and justify your construction

: $37\frac{1}{2}^\circ$



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10. Using ruler and compasses, construct the following angles and justify your construction

$$: 67\frac{1}{2}^{\circ}$$



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11. Construct a triangle ABC in which $BC = 7\text{cm}$,

$$\angle B = 75^{\circ} \text{ and } AB + AC = 13\text{cm}.$$



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12. Construct a triangle ABC in which
 $BC = 8\text{cm}$, $\angle B = 45^\circ$ and
 $AB - AC = 3.5\text{cm}$.



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13. Construct a triangle PQR in which
 $QR = 6\text{cm}$, $\angle Q = 60^\circ$ and $PR - PQ = 2$
cm.



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



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16. Construct a triangle having given the base equal to 5 cm., sum of two sides equal to 7.7 cm and one of the angles at the base = 60° .



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17. Construct a triangle ABC having :
 $\angle B = 30^\circ$, BC = 5 cm and
 $AB - CA = 2.5\text{cm}$.



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18. Construct a triangle ABC having :

$\angle B = 30^\circ$, $BC = 5$ cm and

$AB - CA = 2.5$ cm.



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19. Construct a triangle ABC whose perimeter is 8 cm and the base angles are 45° and 60° .



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20. Construct a triangle with perimeter 12 cm and ratio of the sides 3:4:5, what type of triangle is this ?



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21. Construct a right triangle when one side is 3.5 cm and sum of other side and hypotenuse 5.5 cm.



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22. Construct a triangle ABC where $BC = 6.5$ cm,
 $CA + AB = 10$ cm and $\angle B = 60^\circ$.



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23. Construct a $\triangle ABC$ in which base $BC = 4.6$
cm, $\angle B = 45^\circ$ and $AB + CA = 8.2$ cm.



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24. Construct a triangle ABC with perimeter 10 cm and each base angle is of 45° .



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25. Construct a triangle in which one base angle is 45° and side opposite to it is 1.7 cm and sum of other two sides is 4.5 cm.



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26. Construct a triangle with base of length 7.5 cm, the difference of the other two sides 2.5 cm and one base angle of 45° .



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27. Construct an equilateral triangle with perimeter 14.5 cm.



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28. In a pair of set-squares the order is with angles :

A. 30° , 60° , 90°

B. 30° , 30° , 45°

C. 75° , 25° , 80°

D. 65° , 15° , 100° .

Answer:



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29. In a pair of set-squares the order is with angles :

A. 45° , 45° , 90°

B. 30° , 50° , 100°

C. 60° , 60° , 60°

D. None.

Answer:



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30. To draw the perpendicular bisector of line segment AB , we open the compass

A. More than $\frac{1}{2}AB$

B. Less than $\frac{1}{2}AB$

C. Equal to AB

D. None.

Answer:



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31. To construct an angle of $22\frac{1}{2}^\circ$ we

A. bisect an angle of 60°

B. bisect an angle of 30°

C. bisect an angle of 45°

D. None.

Answer:



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32. To construct a triangle we must know at least its parts .

A. Two

B. One

C. Three

D. Five.

Answer:



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33. For which of the following condition the construction of a triangle is not possible :

A. If two sides and angle included between them is not given

B. If two sides and included angle between them is given

C. If its three sides are given

D. If two angles and side between them is given.

Answer:



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34. Construction of a triangle is not possible if

:

A. $AB + AC < BC$

B. $AB + AC = BC$

C. (A) and $(B) \perp h$

D. $AB + AC > BC$.

Answer:



35. With the help of ruler and compass it is not possible to construct an angle of :

A. 37.5°

B. 40°

C. 22.5°

D. 67.5° .

Answer:



