



MATHS

BOOKS - PSEB

Practical Geometry

Exercise

1. Construct DEF such that $DE = 5$ cm, $DF = 3$ cm and $m \angle EDF = 90^\circ$



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2. Construct an isosceles triangle in which the lengths of each of its equal sides is 6.5 cm and the angle between them is 110°



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



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4. Draw a line l . Draw a perpendicular to l at any point on l . On this perpendicular choose a point X , 4 cm away from l . Through X , draw a line m parallel to l .



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5. Let l be a line and P be a point not on l . Through P , draw a line m parallel to l . Now join P to any point Q on l . Choose any other point R on m . Through R , draw a line parallel to PQ .

Let this meet at S. What shape do the two sets of parallel lines enclose?



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6. Construct a triangle ABC, given that $AB = 5$ cm, $BC = 6$ cm and $AC = 7$ cm



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7. Construct XYZ in which $XY = 4.5$ cm, $YZ = 5$ cm and $ZX = 6$ cm



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8. Construct an equilateral triangle of side 5.5 cm



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9. Draw $\triangle PQR$ with $PQ = 4$ cm, $QR = 3.5$ cm and $PR = 4$ cm. What type of triangle is this?



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10. Construct $\triangle ABC$ such that $AB = 2.5$ cm, $BC = 6$ cm and $AC = 6.5$ cm. Measure $\angle B$



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11. Construct a triangle PQR , given that $PQ = 3$ cm, $QR = 5.5$ cm and $\angle PQR = 60^\circ$



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12. Construct DEF such that $DE = 5$ cm, $DF = 3$ cm and $m \angle EDF = 90^\circ$



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13. Construct an isosceles triangle in which the lengths of each of its equal sides is 6.5 cm and the angle between them is 110°



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14. Construct $\triangle ABC$ with $BC = 7.5$ cm, $AC = 5$ cm and $m \angle C = 60^\circ$



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15. Construct $\triangle XYZ$ if it is given that $XY = 6$ cm, $\angle ZXY = 30^\circ$ and $\angle XYZ = 100^\circ$



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16.

Construct

$\angle ABC$, given $m\angle A = 60^\circ$, $m\angle B = 30^\circ$ and $AB = 5.8$ cm.



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17. Construct $\triangle PQR$ if $PQ = 5$ cm, $m\angle PQR = 105^\circ$ and $m\angle QRP = 40^\circ$



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18. Examine whether you can construct $\triangle DEF$ such that $EF = 7.2$ cm, $m \angle E = 110^\circ$ and $m \angle F = 80^\circ$. Justify your answer.



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19. Construct $\triangle LMN$, right-angled at M , given that $LN = 5$ cm and $MN = 3$ cm.



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20. Construct an Acute angled Triangle having one right angle.



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21. Construct a right-angled triangle whose hypotenuse is 6 cm long and one of the legs is 4 cm long



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22. Construct an isosceles right-angled $\triangle ABC$, where $\angle ACB = 90^\circ$ and $AC = 6$ cm.



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23. Below are given the measures of certain sides and angles of triangles. Identify those which cannot be constructed and, say why you cannot construct them. Construct rest of the triangles. Given That : Triangle $\triangle ABC$

Measurements $m\angle A = 85^\circ$, $m\angle B = 115^\circ$,

$AB = 5$ cm.



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24. Below are given the measures of certain sides and angles of triangles. Identify those which cannot be constructed and, say why you cannot construct them. Construct rest of the triangles. Given That : Triangle $\triangle PQR$

Measurements $m\angle Q = 30^\circ$, $m\angle R = 60^\circ$,

$QR = 4.7$ cm.



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25. Below are given the measures of certain sides and angles of triangles. Identify those which cannot be constructed and, say why you cannot construct them. Given That : Triangle

$\triangle ABC$

Measurements

$m\angle A = 70^\circ$, $m\angle B = 50^\circ$, $AB = 3$ cm.



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26. Below are given the measures of certain sides and angles of triangles. Identify those which cannot be constructed and, say why you cannot construct them. Construct rest of the triangles. Given That : Triangle $\triangle LMN$
Measurements $m\angle L = 60^\circ$, $m\angle N = 120^\circ$,
 $LM = 5$ cm.



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27. Below are given the measures of certain sides and angles of triangles. Identify those which cannot be constructed and, say why you cannot construct them. Construct rest of the triangles. Given That : Triangle $\triangle ABC$ $BC = 2$ cm, $AB = 4$ cm, $AC = 2$ cm.



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28. Below are given the measures of certain sides and angles of triangles. Identify those

which cannot be constructed and, say why you cannot construct them. Construct rest of the triangles. Given That : Triangle $\triangle PQR$ $PQ = 3.5$ cm., $QR = 4$ cm., $PR = 3.5$ cm



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29. Below are given the measures of certain sides and angles of triangles. Identify those which cannot be constructed and, say why you cannot construct them. Construct rest of the

triangles. Given That : Triangle $\triangle XYZ$ $XY = 3$
cm, $YZ = 4$ cm, $XZ = 5$ cm



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30. Below are given the measures of certain sides and angles of triangles. Identify those which cannot be constructed and, say why you cannot construct them. Construct rest of the triangles. Given That : Triangle $\triangle DEF$ $DE = 4.5$ cm, $EF = 5.5$ cm, $DF = 4$ cm



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