

MATHS

BOOKS - PSEB

Practical Geometry

Exercise

1. Construct DEF such that DE = 5 cm, DF = 3 cm

and m
$$\angle EDF = 90^{\circ}$$



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.



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



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5. Let I be a line and P be a point not on I.

Through P, draw a line m parallel to I. Now join
P to any point Q on I. Choose any other point
R on m. Through R, draw a line parallel to PQ.

Let this meet lat 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

8. Construct an equilateral triangle of side 5.5 cm



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



10. Construct 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 $\angle PQR = 60^{\circ}$



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°

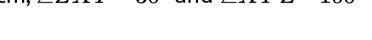


14. Construct \triangle ABC with BC = 7.5 cm, AC = 5 cm and m $\angle C = 60^{\circ}$



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





16. Construct

$$\angle ABC, givenmA = 60^{\circ}, mB = 30^{\circ}$$
 and AB

- = 5.8 cm.

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17. Construct PQR if PQ = 5 cm, m

$$\angle PQR = 105^{\circ} \text{ and } \angle QRP = 40^{\circ}$$



18. Examine whether you can construct 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.



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



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 $m\angle Q=30^{\circ}, m\angle R=60^{\circ},$ OR = 4.7 cm.

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 \wedge ABC

Measurements

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



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.



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., OR = 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



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cm, YZ = 4 cm, XZ = 5 cm

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 = 4.5cm, EF = 5.5cm, DF = 4 cm



