



MATHS

BOOKS - SWAN PUBLICATION

PRACTICAL GEOMETRY

Exercise 10 1

1. 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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2. Draw a line parallel to a line l at a distance of 3.5 cm from it .



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3. 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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4. How many parallel lines can be drawn ,
passing through a point not lying on the given
line ?

A. 0

B. 2

C. 1

D. 3

Answer: C



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5. Which of the following is used to draw a line parallel to a given line ?

A. A protractor

B. A ruler

C. A compasses

D. A ruler and compasses .

Answer: D



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Exercise 10 2

1. Construct a $\triangle ABC$ in which $AB = 3.5$ cm , $BC = 5$ cm and $CA = 7$ cm .



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2. Construct a triangle ABC in which $AB = BC = 6.5$ cm and $CA = 4$ cm . Also name the kind of triangle drawn .



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3. Construct a triangle XYZ such that length of each side is 5 cm .Also name the kind of triangle drawn.



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4. Construct a triangle PQR such that $PQ = 2.5$,
 $QR = 6\text{cm}$ and $RP = 6.5\text{ cm}$. Also name the kind
of triangle drawn .



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5. Construct a triangle ABC , in which $AB = 6\text{ cm}$
, $BC = 2\text{ cm}$, $CA = 3\text{ cm}$. (If possible) . If not
possible give the reason .



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6. Which of the following can be used to construct a triangle ?

A. The lengths of the three sides

B. The perimeter of the triangle

C. The measures of three angles

D. The name of three vertices

Answer:



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7. A triangle can be constructed by taking its sides as

A. 1.8 cm , 2.6 cm, 4.4 cm

B. 3 cm ,4 cm , 8 cm

C. 4 cm , 7 cm , 2 cm .

D. 5 cm , 4 cm, 4 cm

Answer:



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Exercise 10 3

1. Construct $\triangle ABC$ such that $AB = 4\text{cm}$,
 $\angle B = 30^\circ$, $BC = 4\text{cm}$. Also name the type
of this triangle on the basis of sides .



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2. Construct $\triangle ABC$ with $AB = 7.5\text{cm}$, $BC = 5$
 cm and $\angle B = 30^\circ$.



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3. Construct a triangle XYZ such that $XY = 6 \text{ cm}$, $YZ = 6 \text{ cm}$ and $\angle Y = 60^\circ$. Also name the type of this triangle .



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4. Which of the following triangle can be constructed using SAS eriterion .

A. $AB = 5\text{cm}$, $BC = 5\text{cm}$, $CA = 6\text{cm}$

B. $AB = 5\text{cm}$, $BC = 5\text{cm}$, $\angle B = 40^\circ$

C. $\angle A = 60^\circ$, $\angle B = 60^\circ$, $\angle C = 60^\circ$

D. $BC = 5\text{cm}$, $\angle B = \angle C = 45^\circ$

Answer: B



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Exercise 10 4

1. Construct $\triangle ABC$, given $AB=6\text{cm}$,
 $\angle A = 30^\circ$ and $\angle B = 75^\circ$.



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



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3. Construct $\triangle XYZ$ if
 $XY = 4\text{cm}$, $\angle Y = 45^\circ$ and $\angle Z = 60^\circ$



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4. Examine whether you can construct ΔPQR

such that

$\angle P = 100^\circ$, $\angle Q = 90^\circ$ and $PQ = 4.3$ cm .

If not possible give reason .



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5. In Which of the following cases a unique triangle can be drawn ?

A.

$BC = 5\text{cm}$, $\angle B = 90^\circ$ and $\angle C = 100^\circ$

B.

$$AB = 4\text{cm}, BC = 7\text{cm} \text{ and } CA = 2\text{cm}$$

C. $XY = 5\text{cm}, \angle X = 45^\circ, \angle Y = 60^\circ$

D. An isosceles triangles with length of each equal side equal to 5 cm .

Answer: C



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6. An triangle can be constructed by taking two of its angles as

A. $110^\circ, 40^\circ$

B. $70^\circ, 115^\circ$

C. $135^\circ, 45^\circ$

D. $90^\circ, 90^\circ$

Answer: A



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Exercise 10 5

1. in a right angled triangle ABC with $\angle C = 90^\circ$, $AB = 5\text{cm}$ and $BC = 3\text{cm}$. find AC



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2. Construct an isosceles right angled triangle DEF where $\angle E = 90^\circ$ and $EF = 6\text{cm}$.



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3. Construct a right angled triangle PQR in which

$$\angle Q = 90^\circ, PQ = 3.6\text{cm} \text{ and } PR = 8.5\text{cm} .$$



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4. Which of the following is a pythagorian triplet ?

A. 1,2,3

B. 2,3 , 4

C. 4 ,5 , 6

D. 12, 13, 5

Answer: D



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5. Construction of unique triangle is not possible when

A. Three sides are given .

B. Two sides and an included angle are given .

C. Three angles are given .

D. Two angles & included side are given .

Answer: C



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Other Important Questions

1. Fill in the blanks :

Through a point not lying on the the given lines we can draw parallel lines .



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2. To draw a line parallel to given line we use

..... .



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3. Sum of the lengths of two sides of a triangle is Than the length of third side .



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4. A triangle can be constructed if two sides and Between them us given .



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5. A triangle can be constructed if two sides and Between them is given .



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6. A triangle can be constructed if three
Are given



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7. State whether the following statements are true or false .

A triangle can be constructed if its three angles are given .



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8. A triangle can be constructed by taking sides 3 cm , 7 cm , 4 cm .



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9. A triangle can be constructed if its perimeter is given .



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10. A triangle can be constructed if $AB = 7$ cm ,
 $BC = 6$ cm and $\angle B = 60^\circ$.



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11. A triangle can be constructed if $AB = 7 \text{ cm}$,
 $BC = 6 \text{ cm}$ and $\angle B = 60^\circ$.



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12. A triangle can be constructed by taking two
of its angles as 130° and 50° .



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