MATHS

BOOKS - OSWAL PUBLICATION

CONSTRUCTIONS

Example

1. PQ is a line segment of length 6.4 cm. Geometrically obtain point R on PQ such that

$\frac{QR}{PQ} = \frac{5}{8}$. In which ratio the line segment PQ is divided ?

Watch Video Solution

2. Construct a pair of tangents to a circle of radius 3 cm which are inclined to each other at an angle of 60°

Watch Video Solution

Self Assesment 1 Objective Type Questions A Multiple Choice Questions

1. To find a point P on the line segment AB = 6 cm, such that $\frac{AP}{AB} = \frac{2}{5}$, in which ratio the line segment AB is divided.

A. $2:5$

B. $2:3$

C. $5:2$

D. $3:5$

Answer:

Watch Video Solution

2. To divide a line segment AB in the ratio 4:7, a ray AX is drawn first such that $\angle BAX$ is an acute angle and then points A_1, A_2, A_3, ... are located at equal distance on the ray AX and the point B is joined to

A. A_{12}

B. A_{11}

C. A_{10}

D. A_9

Answer:

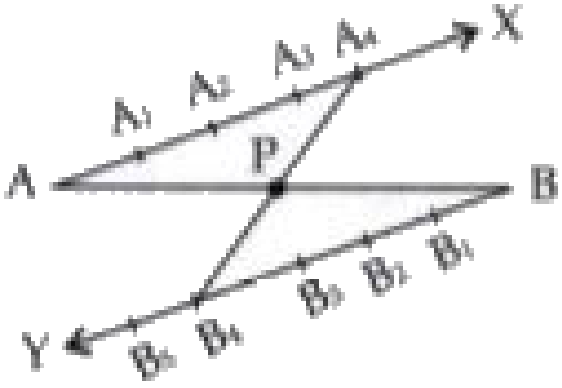
Watch Video Solution

Self Assesment 1 Fill In The Blanks

1. A line segment AB is divided at point P such that PB : AB = 3:7, then the ratio of AP : PB = _____.

Watch Video Solution

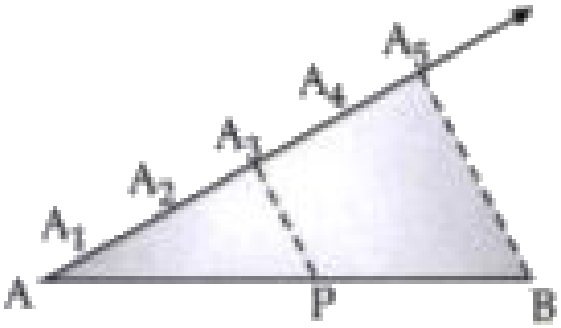
2. From the following figure, point P divides AB internally in the ratio _____.



Watch Video Solution

Self Assesment 1 Very Short Answer Type Questions

1. What is the ratio of division of the line segment AB by the point P from A ?



Watch Video Solution

Self Assesment 1 Ii Short Answer Type Questions

1. Draw a line segment of length 5 cm and divide it in the ratio 3:7.

Watch Video Solution

2. Draw a line segment of length 7cm. Find a point P on it which divides it in the ratio 3:5.

Watch Video Solution

Self Assesment 1 Iii Short Answer Type Questions

1. Draw a line segment of length 8 cm and divides it in the ratio $2:3$

Watch Video Solution

Self Assesment 1 Iv Long Answer Type Questions

1. Draw a line segment of length 7.6 cm and divide it in the ratio 5 : 8. Measure the two parts.

Watch Video Solution

2. Two line-segments AB and AC include an angle of 60°, where AB = 5 cm and AC = 7 cm. Locate points P an Q on AB and Ac respectively such that AP $= \frac{3}{4}AB$ and $AQ = \frac{1}{4}AC$. Join P and Q and measure the length PQ.

Watch Video Solution

Self Assesment 2 Objective Type Questions Multiple Choice Questions

1. To draw a pair of tangents to a circle which are inclined to each other at an angle of 50°, it is required to draw tangents at the end points of there two radii of the circle, the angle between two radii is

A. 105°

B. 130°

C. 75°

D. 125°

Answer: B

Watch Video Solution

2. If we draw a tangents to a circle at a given point on it, when the centre of the circle is known, then the angle between the tangent and radius of the circle is

A. 60°

B. 180°

C. 90°

D. 120°

Answer:

Watch Video Solution

Self Assesment 2 Fill In The Blanks

1. The lengths of tangents drawn from an external point to a circle are _____.

Watch Video Solution

2. The number of tangent/tangents drawn from a point outside to a circle is/are _____.

Watch Video Solution

3. There is only _____ tangent drawn at a point on the circle.

Watch Video Solution

Self Assesment 2 Very Short Answer Type Questions

1. What is the angle between the two tangents drawn from an external point to a circle and the angle subtended by the line-segment joining the points of the contact at the centre.

Watch Video Solution

2. How many common tangents can be drawn when two circles touch each other internally.

Watch Video Solution

Self Assesment 2 Ii Short Answer Type Questions

1. Find the length of tangent drawn to a circle of radius 6 cm, from a point at a distance of 10 cm from the centre.

Watch Video Solution

2. Let ABC be a right triangle in which AB = 6 cm, BC = 8 cm and $\angle B = 90^\circ$. BD is the= perpendicular from B on AC. The circle

through B, C, D is drawn. Construct the tangents from A to this circle.

Watch Video Solution

3. Draw a line segment AB of length 7 cm. Taking A as centre, draw a circle of radius 3 cm and taking B as centre, draw another circle of radius 2 cm. Construct tangents to each circle from the centre of the circle.

Watch Video Solution

Self Assesment 2 Iii Short Answer Type Questions

1. Draw a circle of radius 4 cm. From the point 7 cm away from its centre, construct the pair of tangents to the circle.

Watch Video Solution

Self Assesment 2 Iv Long Answer Type Questions

1. Construct a tangent to a circle of radius 4 cm from a point on the concentric circle of

radius 6 cm and measure its length. Also verify the measurement by actual calculation

Watch Video Solution

2. Draw a circle of radius 3 cm. Take two points P and Q on one of its extended diameter each at a distance of 7 cm from its centre. Draw tangents to the circle from these two points P and Q.

Watch Video Solution

3. Draw two concentric circles of radii 2 cm and 5 cm. Take a point P on the outer circle and construct a pair of tangents PA and PB to the smaller circle. Measure PA.

Watch Video Solution

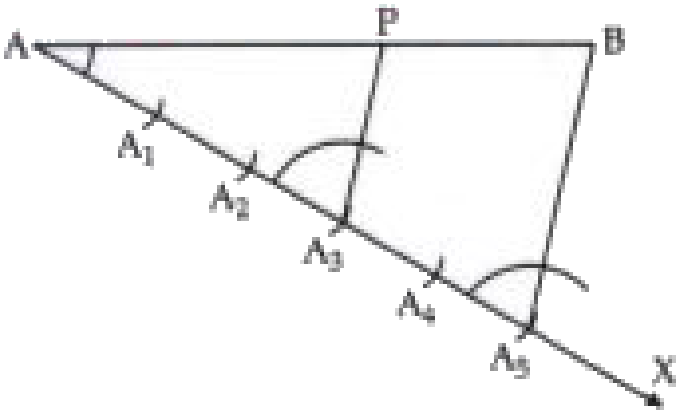
4. Draw a circle of radius 4 cm. Draw two tangents to the circle inclined at an angle of 60° to each other.

Watch Video Solution

5. Draw a line segment AB of length 8 cm. Taking A as centre, draw a circle of radius 4 cm and taking B as centre, draw another circle of radius 3 cm. Construct tangents to each circle from the centre of the other circle.

Watch Video Solution

Self Assesment 2 Care Study Based Questions



1.

AB is a line segment of lengh 10 cm which is internally divided in the ratio 3 : 2.

Find the length of AP

A. 6 cm

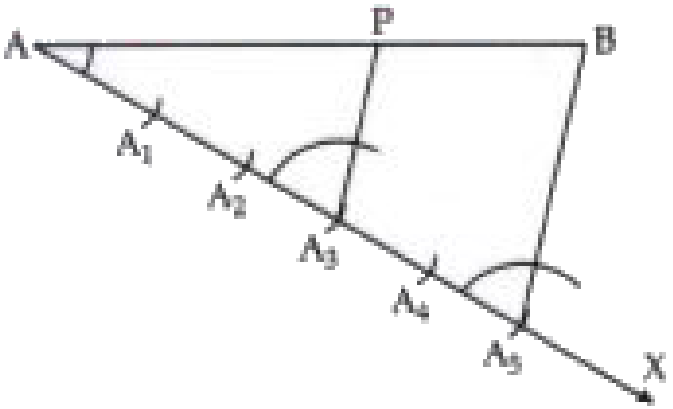
B. 4 cm

C. 5 cm

D. 2 cm

Answer:

Watch Video Solution



2.

AB is a line segment of lengh 10 cm which is

internally divided in the ratio 3 : 2.

Find the length of BP

A. 5 cm

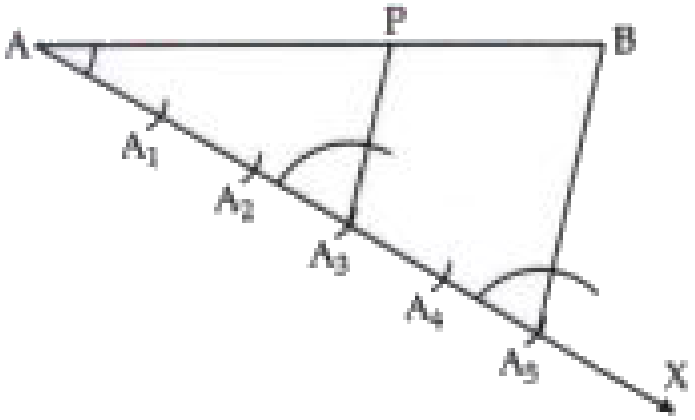
B. 2 cm

C. 6 cm

D. 4 cm

Answer:

Watch Video Solution



3.

AB is a line segment of lengh 10 cm which is internally divided in the ratio 3 : 2.

$\angle BAX$ is a ..... angle.

A. right

B. acute

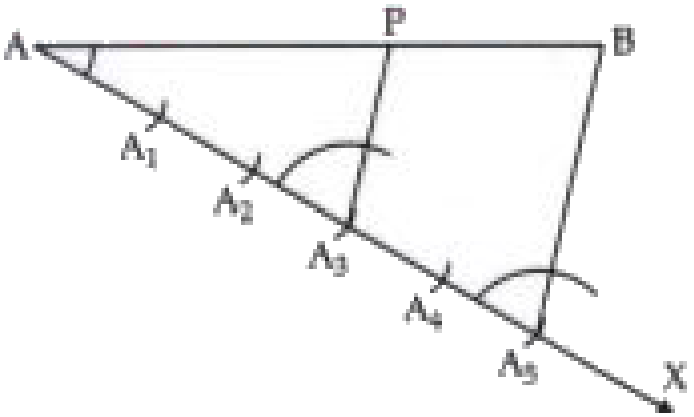
C. straight

D. obtuse

Answer:

Watch Video Solution

4.



AB is a line segment of lengh 10 cm which is internally divided in the ratio 3 : 2.

Two lines PA_3 and BA_5 are .....to each other.

A. equal

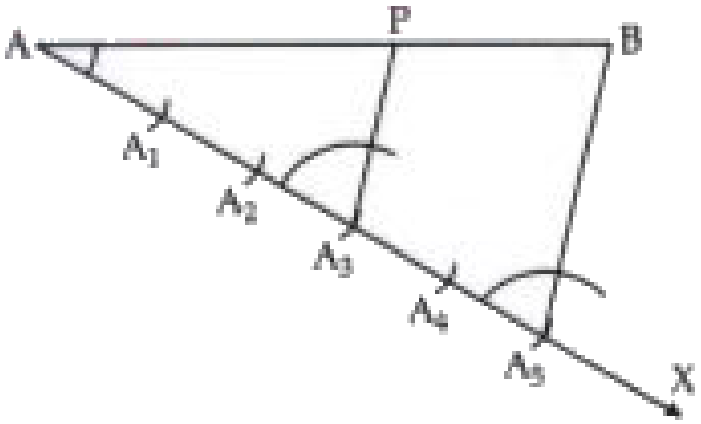
B. Perpendicular

C. Parallel

D. None of these

Answer:

Watch Video Solution



5.

AB is a line segment of lengh 10 cm which is internally divided in the ratio 3 : 2.

$\angle BA_5A$ is .....to $\angle AA_3P$.

A. equal

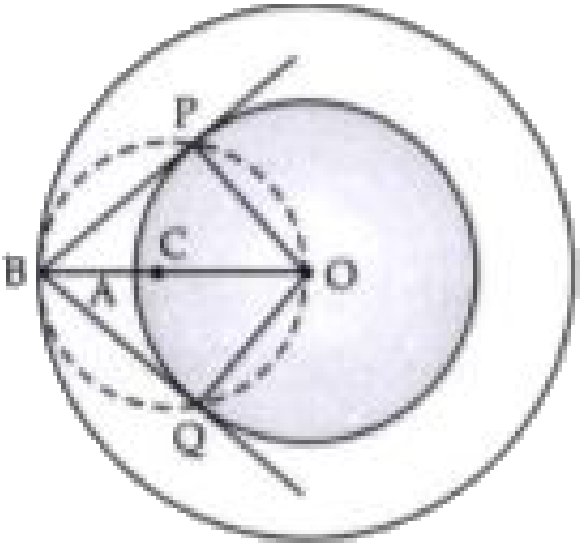
B. unequal

C. five times

D. two times

Answer:

Watch Video Solution



6.

In the given figure, there are two concentrci circle of radius 4 cm and 6 cm. C is the centre of the circle whose diameter is OB. BP and BQ

are the two tangents drawn from the larger circle of radius 6 cm to the smaller circle of radius 4 cm. Find the length of tangent BQ

A. $3\sqrt{5}cm$

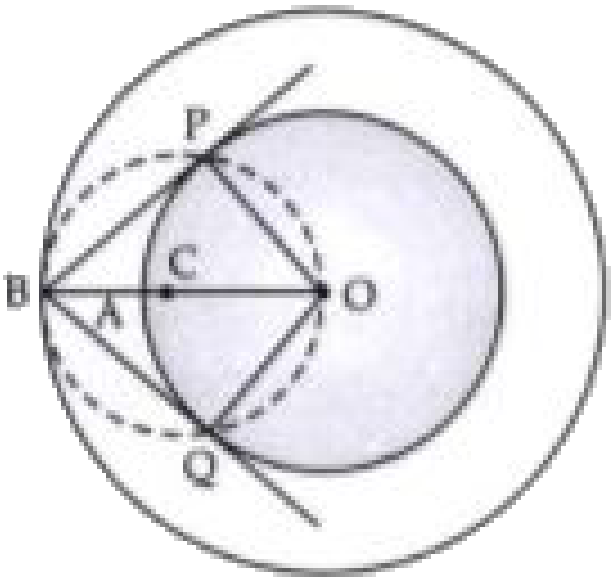
B. $4\sqrt{5}cm$

C. $2\sqrt{5}cm$

D. $5\sqrt{5}cm$

Answer:

Watch Video Solution



7.

$\angle PBQ$ and $\angle POQ$ are ..... angles.

A. Complementary

B. Supplementary

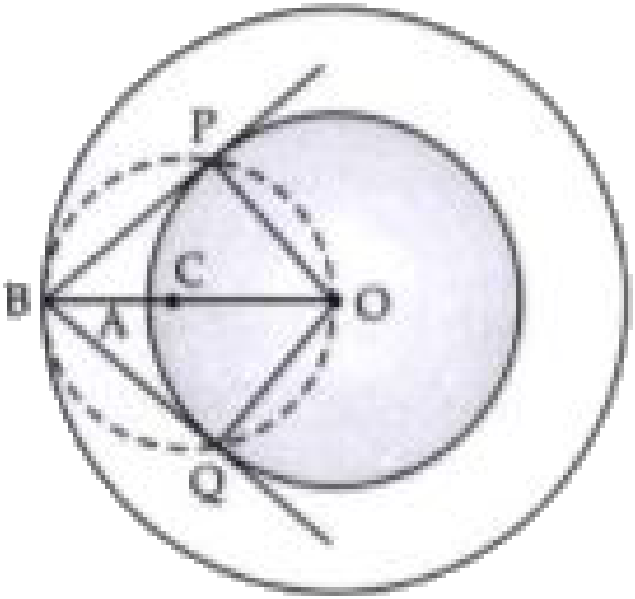
C. acute

D. right

Answer:

Watch Video Solution

8.



If $\angle POQ$ is 70°, then find the value of $\angle PBQ$.

A. 100°

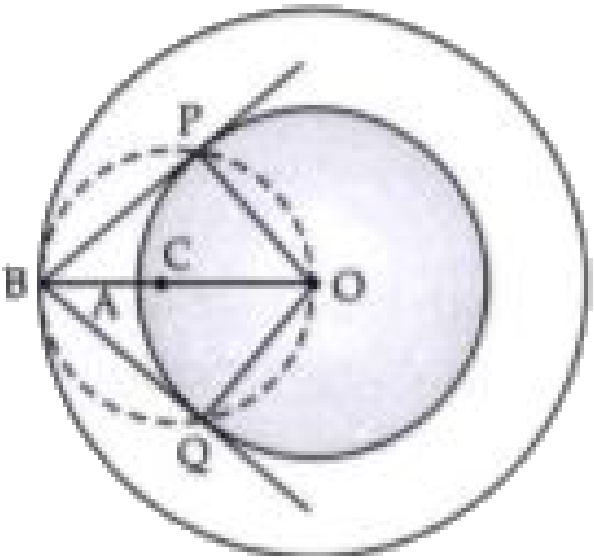
B. 90°

C. 40°

D. 110°

Answer:

Watch Video Solution



9.

In the given figure, there are two concentrci circle of radius 4 cm and 6 cm. C is the centre of the circle whose diameter is OB. BP and BQ are the two tangents drawn from the larger circle of radius 6 cm to the smaller circle of radius 4 cm. If $\angle POQ$ is 90°, then find the length of chord PQ.

A. 5 cm

B. $4\sqrt{2}cm$

C. $2\sqrt{2}cm$

D. $3\sqrt{2}cm$

Answer:

Watch Video Solution

Ncert Corner Exercise Ii 1

1. Draw a line segment of length 7.6 cm and divide it in the ratio 5 : 8. Measure the two parts.

Watch Video Solution

2. Construct a triangle of sides 4 cm, 5 cm and 6 cm and then a triangle similar to it whose sides are $\frac{2}{3}$ of the corresponding sides of the first triangle.

Watch Video Solution

3. Construct a triangle with sides 5 cm, 6 cm and 7 cm and then another triangle whose sides are $\frac{7}{5}$ of the corresponding sides of the first triangle.

Watch Video Solution

4. Construct an isosceles triangle whose base is 8 cm and altitude 4 cm and then another triangle whose sides are $1\frac{1}{2}$ times the corresponding sides of the isosceles triangle.

Watch Video Solution

5. Draw a triangle ABC with side BC = 6 cm, AB = 5 cm and $\angle ABC = 60^\circ$. Then construct a triangle whose sides are $\frac{3}{4}$ of the corresponding sides of the triangle ABC.

Watch Video Solution

6. Draw a triangle ABC with side BC = 7 cm, $\angle B = 45^\circ, \angle A = 105^\circ$. Then, construct a

triangle whose sides are $\frac{4}{3}$ times the corresponding sides of $\triangle$ ABC.

Watch Video Solution

7. Draw a right triangle in which the sides (other than hypotenuse) are of lengths 4 cm and 3 cm. Then construct another triangle whose sides are $\frac{5}{3}$ times the corresponding sides of the given triangle.

Watch Video Solution

Ncert Corner Exercise Ii 2

1. Draw a circle of radius 6 cm. From a point 10 cm away from its centre, construct the pair of tangents to the circle and measure their lengths.

Watch Video Solution

2. Construct a tangent to a circle of radius 4 cm from a point on the concentric circle of

radius 6 cm and measure its length. Also verify the measurement by actual calculation

Watch Video Solution

3. Draw a circle of radius 3 cm. Take two points P and Q on one of its extended diameter each at a distance of 7 cm from its centre. Draw tangents to the circle from these two points P and Q.

Watch Video Solution

4. Draw a pair of tangent to a circle of radius 5 cm which are inclined to each other at an angle of 60°. Give steps of construction.

Watch Video Solution

5. Draw a line segment AB of length 8 cm. Taking A as centre, draw a circle of radius 4 cm and taking B as centre, draw another circle of radius 3 cm. Construct tangents to each circle from the centre of the other circle.

Watch Video Solution

6. Let ABC be a right triangle in which AB = 6 cm, BC = 8 cm and $\angle B = 90^\circ$. BD is the= perpendicular from B on AC. The circle through B, C, D is drawn. Construct the tangents from A to this circle.

Watch Video Solution

7. Draw a circle with the help of a bangle. Take a point outside the circle. Construct the pair

of tangents from this point to the circle.

Watch Video Solution

Ncert Corner Exercise 10 1

1. To divide a line segment AB in the ratio 5:7, first a ray AX is drawn, so that $\angle BAX$ is an acute angle and then at equal distances point are marked on the ray AX such that the minimum number of these points is

A. 8

B. 10

C. 11

D. 12

Answer: D

Watch Video Solution

2. To divide a line segment AB in the ratio 4:7, a ray AX is drawn first such that $\angle BAX$ is an acute angle and then points $A_1, A_2, A_3, \ldots\ldots$

are located at equal distance on the ray AX and the point B is joined to

A. A_{12}

B. A_{11}

C. A_{10}

D. A_9

Answer: B

Watch Video Solution

3. To divide a line segment AB in the ratio 5:6, draw a ray AX such that $\angle BAX$ is an acute angle, the draw a ray BY parallel to AX and the points

$A_1, A_2, A_3, \ldots.$ and $B_1, B_2, B_3, \ldots.$ are located to equal distances on ray AX and BY, respectively. Then, the points joined are

A. A_5 and B_6

B. A_6 and B_5

C. A_4 and B_5

D. A_5 and B_4

Answer: A

Watch Video Solution

4. To construct a triangle similar to a given ΔABC with its sides $\frac{3}{7}$ of the corresponding sides of ΔABC, first draw a ray BX such that $\angle CBX$ is an acute angle and X lies on the opposite side of A with respect to BC. Then,

locate points $B_1, B_2, B_3, \ldots .$ on BX at equal distances and next step is to join

A. B_{10} to C

B. B_3 to C

C. B_7 to C

D. B_4 to C

Answer: C

Watch Video Solution

5. To construct a triangle similar to a given ΔABC with its sides $\frac{8}{5}$ of the corresponding sides of ΔABC draw a ray BX such that $\angle CBX$ is an acute angle and X is on the opposite side of A with respect of BC. The minimum number of points to be located at equal distances on the ray BX is

A. 5

B. 8

C. 13

D. 3

Answer: B

Watch Video Solution

6. To draw a pair of tangents to a circle which are inclined to each other at an angle of 60°, it is required to draw tangents at end points of those two radii of the circle, the angle between them should be

A. 135°

B. 90°

C. 60°

D. 120°

Answer: D

Watch Video Solution

Ncert Corner Exercise 10 2 True Or False

1. By geometrical construction, it is possible to divide a line segment in the ratio $\sqrt{3}: \frac{1}{\sqrt{3}}$.

Watch Video Solution

2. To constuct a triangle similar to a given ΔABC with its sides $\frac{7}{3}$ of the corresponding side of ΔABC, draw a ray BX making acute angle with BC and X lies on the opposite side of A with respect of BC. The points $B_1, B_2, \ldots\ldots, B_7$ are located at equal distances on BX, B_3 is joined to C and then a line segment B_6C' is drawn parallel to B_3C, where C' lines on BC produced. Finally line segment A'C' is drawn parallel to AC.

Watch Video Solution

3. A pair of tangents can be constructed from a point P to a circle of radius 3.5 cm situated at a distance of 3 cm from the centre.

Watch Video Solution

4. A pair of tangents can be constructed to a circle inclined at an angle of 170°

Watch Video Solution

Ncert Corner Exercise 10 3

1. Draw a line segment of length 7cm. Find a point P on it which divides it in the ratio 3:5.

Watch Video Solution

2. Draw a right ΔABC in which BC=12 cm, AB=5 cm, and $\angle B = 90^\circ$. Construct a triangle similar to it and of scale factor $\frac{2}{3}$. Is the new triangle also a right triangle ?

Watch Video Solution

3. Draw a ΔABC in which BC = 6 cm, CA = 5 cm and AB = 4 cm. Construct a triangle similar to it and of scale factor $\frac{5}{3}$.

Watch Video Solution

4. Construct a tangent to a circle of radius 4cm from a point which is at a distance of 6 cm from its centre.

Watch Video Solution

Ncert Corner Exercise 10 4

1. Draw a parallelogram ABCD in which BC = 5 cm, AB = 3 cm and $\angle ABC = 60^\circ$. Divide it into triangles BCD and ABD, by diagonal BD. Construct the triangle BD'C' similar to ΔBDC with scale factor $\frac{4}{3}$. Draw the line segment D'A' parallel to DA, where A' lies on extended side BA Is A'BC'D' a parallelogram ?

Watch Video Solution

2. Draw two concentric circle of radii 3 cm and 5 cm. Taking a point on outer circle construct the pair of tangents to the other. Measure the length of a tangent and verify it by actual calculation.

Watch Video Solution

3. Draw an isosceles triangle ABC in which AB = AC = 6 cm and BC = 5 cm. Construct a triangle

PQR similar to ΔABC in which PQ = 8 cm. Also justify the construction

Watch Video Solution

4. Draw a ΔABC in which AB = 5 cm, BC = 6 cm and $\angle ABC = 60^\circ$. Construct a triangle similar to ΔABC with scale factor $\frac{5}{7}$. Justify the construction.

Watch Video Solution

5. Draw a circle of radius 4 cm. Construct a pair of tangents to it, the angle between which is 60°. Also justify the construction. Measure the distance between the centre of the circle and the point of intersection of tangents.

Watch Video Solution

6. Draw a ΔABC in which AB = 4 cm, BC = 6 cm, and AC = 9 cm. Construct a triangle similar to ΔABC with scale factor $\frac{3}{2}$. Justify the

construction. Are the two triangle congruence ? Note that, all the three angles and two sides of the two triangles are equal.

Watch Video Solution

Board Corner Short Answer Type Questions

1. Draw a line segment of length 8 cm and divide it internally in the ratio 4:5.

Watch Video Solution

2. Draw a line segment of length 7 cm and divide it internally in the ratio 2:3.

Watch Video Solution

Board Corner Long Answer Type Questions

1. Construct a ΔABC in which CA = 6 cm, AB = 5 cm and $\angle BAC = 45^\circ$. Then construct a triangle whose sides are $\frac{3}{5}$ of the corresponding sides of ΔABC.

Watch Video Solution

2. Draw a triangle ABC with side BC = 7 cm, $\angle B = 45^\circ, \angle A = 105^\circ$. Then, construct a triangle whose sides are $\frac{4}{3}$ times the corresponding sides of $\triangle$ ABC.

Watch Video Solution

3. Construct an equilateral ΔABC with each side 5 cm. Then construct another triangle

whose sides are $\frac{2}{3}$ times the corresponding sides of ΔABC.

Watch Video Solution

4. Draw two concentric circles of radii 2 cm and 5 cm. Take a point P on the outer circle and construct a pair of tangents PA and PB to the smaller circle. Measure PA.

Watch Video Solution

5. Draw a triangle ABC with side BC = 6 cm, AB = 5 cm and $\angle ABC = 60^\circ$. Then construct a triangle whose sides are $\frac{3}{4}$ of the corresponding sides of the triangle ABC.

Watch Video Solution

6. Construct an isosceles triangle whose base is 8 cm and altitude 4 cm and then another triangle whose sides are $1\frac{1}{2}$ times the corresponding sides of the isosceles triangle.

Watch Video Solution

7. Draw a right triangle in which the sides (other than hypotenuse) are of lengths 4 cm and 3 cm. Then construct another triangle whose sides are $\frac{5}{3}$ times the corresponding sides of the given triangle.

Watch Video Solution

Stand Alone Mcqs

1. To divide a line segment AB in the ratio 5:7, first a ray AX is drawn, so that $\angle BAX$ is an acute angle and then at equal distances point are marked on the ray AX such that the minimum number of these points is

A. 8

B. 10

C. 11

D. 12

Answer: D

Watch Video Solution

2. To divide a line segment AB in the ratio 4:7, a ray AX is drawn first such that $\angle BAX$ is an acute angle and then points $A_1, A_2, A_3, \ldots\ldots$ are located at equal distance on the ray AX and the point B is joined to

A. A_{12}

B. A_{11}

C. A_{10}

D. A_9

Answer: B

Watch Video Solution

3. To divide a line segment AB in the ratio 5:6, draw a ray AX such that $\angle BAX$ is an acute angle, the draw a ray BY parallel to AX and the points

$A_1, A_2, A_3, \ldots..$ and $B_1, B_2, B_3, \ldots..$ are

located to equal distances on ray AX and BY, respectively. Then, the points joined are

A. A_5 and B_6

B. A_6 and B_5

C. A_4 and B_5

D. A_5 and B_4

Answer: A

Watch Video Solution

4. To draw a pair of tangents to a circle which are inclined to each other at an angle of 60°, it is required to draw tangents at end points of those two radii of the circle, the angle between them should be

A. 135°

B. 90°

C. 60°

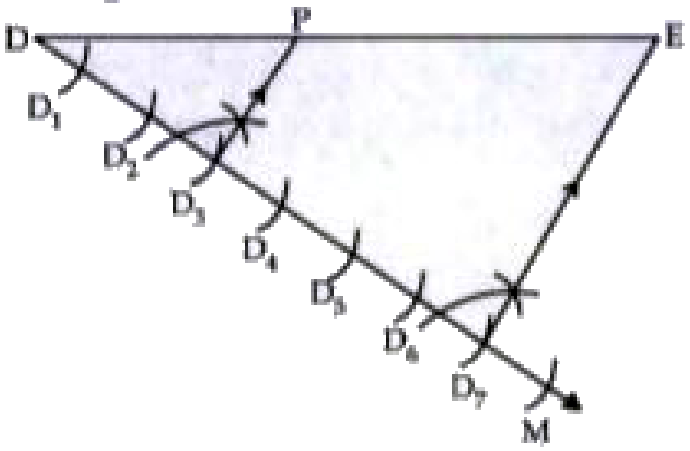
D. 120°

Answer: D

Watch Video Solution

Assertion And Peason Based Mcqs

1. A school conducted Annual Sports Day on a triangular playground . On the ground , parallel lines have been drawn with chalk powder at a distance of 1 m . 7 flower pots have been placed at a disatnce of 1 m from each other along DM as shown in the figure .



PD_3 is parallel to :

A. PD

B. PE

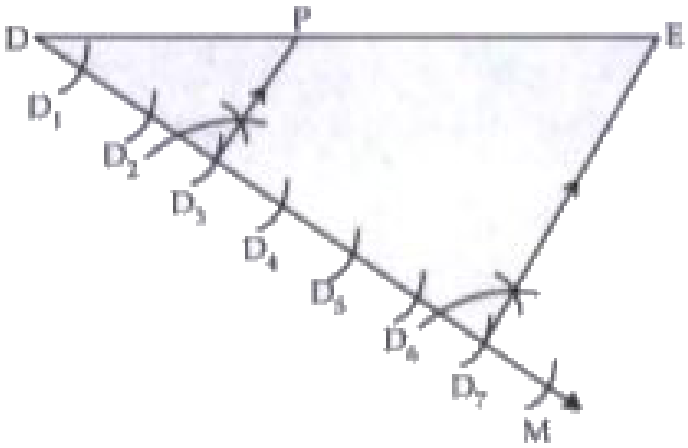
C. ED_7

D. None of these

Answer: C

Watch Video Solution

2. A school conducted Annual Sports Day on a triangular playground . On the ground , parallel lines have been drawn with chalk powder at a distance of 1 m . 7 flower pots have been placed at a disatnce of 1 m from each other along DM as shown in the figure .



If $\angle PD_3D = 82^\circ$, then the measure of $\angle ED_7D$ is :

A. 98°

B. 82°

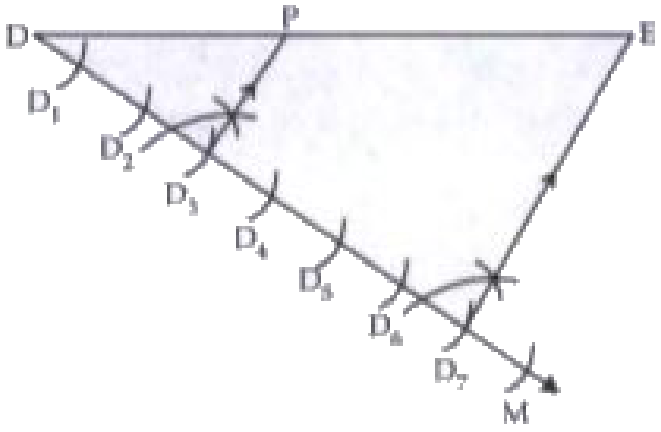
C. 90°

D. 45°

Answer: B

Watch Video Solution

3. A school conducted Annual Sports Day on a triangular playground . On the ground , parallel lines have been drawn with chalk powder at a distance of 1 m . 7 flower pots have been placed at a disatnce of 1 m from each other along DM as shown in the figure .



The ratio in which P divides DE , is

A. $3:4$

B. $7:3$

C. $3:7$

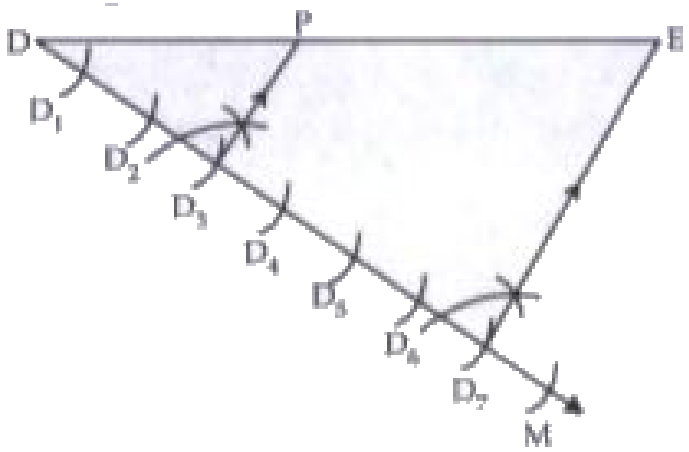
D. $2:5$

Answer: A

Watch Video Solution

4. A school conducted Annual Sports Day on a triangular playground . On the ground , parallel lines have been drawn with chalk

powder at a distance of 1 m . 7 flower pots have been placed at a disatnce of 1 m from each other along DM as shown in the figure .



The ratio of DE to DP will be :

A. $2:5$

B. $3:4$

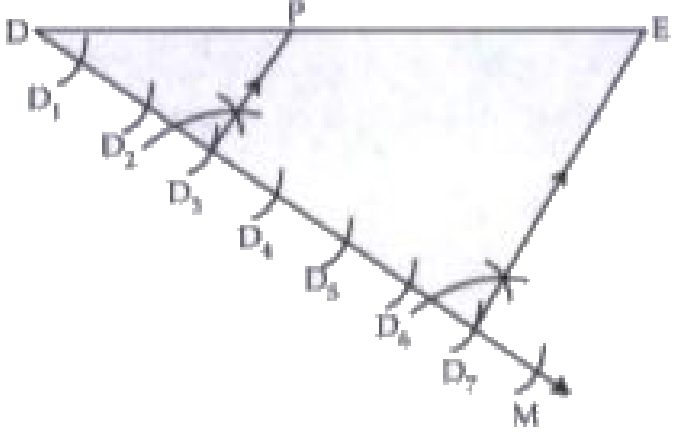
C. $3:7$

D. $7:3$

Answer: D

Watch Video Solution

5. A school conducted Annual Sports Day on a triangular playground . On the ground , parallel lines have been drawn with chalk powder at a distance of 1 m . 7 flower pots have been placed at a disatnce of 1 m from each other along DM as shown in the figure .



The total distance used for putting 7 flower pots is :

A. 6 m

B. 7 m

C. 5 m

D. 8 m

Answer: B

Watch Video Solution

Multiple Choice Questions

1. Which of the following angle can be constructed with the help of a ruler and a pair of compasses ?

A. 35°

B. 37.5°

C. 40°

D. 50°

Answer: B

View Text Solution

2. Which of the following can be the length of BC required to construct the triangle ABC such that AC $= 7.4cm$ and $AB = 5cm$?

A. 3cm

B. 1cm

C. $2.1cm$

D. $13.2cm$

Answer: A

View Text Solution

3. The construction of a triangle ΔABC in which $BC = 6cm$, $\angle A = 50^\circ$ is not possible, when difference of BC and AC is equal to

A. $2.5cm$

B. $4cm$

C. $5.6cm$

D. $6.4cm$

Answer: D

View Text Solution

4. The construction of the triangle ABC is possible if it is given that $BC = 4cm$, $\angle C = 60^\circ$ and the difference of AB and AC is

A. 3cm

B. $4.5cm$

C. $7cm$

D. $5cm$

Answer: A

View Text Solution

5. Which of the following set of lengths can be the sides of a triangle ?

A. $5.5cm, 6.5cm, 8.9cm$

B. $1.6cm, 5.3cm, 3.7cm$

C. $2cm, 4cm, 1.9cm$

D. All of the above

Answer: A

View Text Solution

6. Which of the following sets of angles can be the angles of a triangle ?

A. $50^\circ, 30^\circ, 100^\circ$

B. $30^\circ, 60^\circ, 80^\circ$

C. Both (a) and (b)

D. None of these

Answer: A

View Text Solution

7. If the construction of a ΔABC in which AB=6cm, $\angle A = 70^\circ$ and $\angle B = 40^\circ$ is possible then find the measure of $\angle C$.

A. 30°

B. 40°

C. 60°

D. 70°

Answer: D

View Text Solution

8. With the help of a ruler and compasses, which of the following angle is not possible to be constructed ?

A. 30°

B. 45°

C. 60°

D. 70°

Answer: D

View Text Solution

9. With the help of a ruler and compasses, which of the following angle is not possible to be constructed ?

A. 22.5°

B. 60°

C. 140°

D. 180°

Answer: C

View Text Solution

10. If a , b and c are the lengths of the three sides of a triangle, then which of the following is true ?

A. $A + B < C$

B. $A - B < C$

C. Both are true

D. None of these

Answer: B

View Text Solution

11. Identify the incorrect statement

A. All circles are similar

B. All squares are similar

C. All equilateral triangles are similar

D. All similar figures are congruent

Answer: D

View Text Solution

12. To draw a pair of tangents to a circle which are inclined to each other at an angle of 35°, it is required to draw tangents at the end

points of those two radii of the circle , the angle between which is

A. 180°

B. 145°

C. 150°

D. 140°

Answer: B

View Text Solution

13. To divide a line segment AB in the ratio 3 : 4, first , a ray AX is drawn so that $\angle BAX$ is an acute angle and then at equal distances points are marked on the ray AX such that the minimum number of these points is

A. 5

B. 7

C. 9

D. 11

Answer: B

View Text Solution

14. To divide a line segment AB of length $7.6cm$ in the ratio 5 : 8, a ray AX is drawn first such that $\angle BAX$ froms an acute angle and then points A_1, A_2, A_3,.....are located at equal distances on the ray AX and the point B is joined to

A. A_5

B. A_6

C. A_{10}

D. A_{13}

Answer: D

View Text Solution

15. To construct a pair of tangents to a circle at an angle of 60° to each other, it is needed to draw tangents at end points to those two radii of the circle, the angle between them should be :

A. 100°

B. 90°

C. 180°

D. 120°

Answer: D

View Text Solution

16. To divide a line segment PQ in the ratio m : n , where m and n are two positive integers, draw a ray PX so that $\angle PQX$ is an acute angle and then marks points on ray PX at equal

distances such that the minimum number of these points is

A. $m + n$

B. $m - n$

C. $m + n - 1$

D. Greater of m and n

Answer: A

View Text Solution

17. To draw a pair of tangents to a circle which are inclined to each other at an angle of 45°, it is required to draw tangents at the endpoints of those two radii of the circle , the angle between which is

A. 135°

B. 155°

C. 160°

D. 120°

Answer: A

View Text Solution

18. A pair of tangents can be constructed from a point P to a circle of radius $3.5cm$ situated at a distance of .....from the circle.

A. $3.5cm$

B. $2.5cm$

C. $5cm$

D. $2cm$

Answer: C

View Text Solution

19. To divide a line segment AB in the ratio $5:6$, draw a ray AX such that $\angle BAX$ is an acute angle, then draw a ray BY parallel to AX and the points A_1, A_2, A_3,.....and B_1, B_2, B_3 ,.....are located at equal distances on ray AX and BY, respectively. Then the points joined are

A. A_5 and B_6

B. A_6 and B_5

C. A_4 and B_5

D. A_5 and B_4

Answer: A

View Text Solution

20. In the division of a line segment AB, any ray AX making angle with AB is.....

A. an acute angle

B. a right angle

C. an obtuse angle

D. reflex angle

Answer: A

View Text Solution

21. A point P is at a distance of 8cm from the centre of a circle of radius 5cm. How many tangents can be drawn from point P to the circle ?

A. 0

B. 1

C. 2

D. Infinite

Answer: C

View Text Solution

22. To divide a line segment AB in the ratio p:q, first a ray AX is drawn so that $\angle BAX$ is an acute angle and then at equal distances points are marked on the ray AX such that the

minimum number of these points is 9. Here, the possible ratio of p:q is :

A. $3:5$

B. $4:7$

C. $2:9$

D. $5:4$

Answer: D

View Text Solution

23. If the line segment is divided in the ratio $3:7$, then how many parts does it contain while constructing the point of division ?

A. 3

B. 7

C. 4

D. 10

Answer: D

View Text Solution

24. To divide a line segments AB in the ratio $5:7$, first a ray AX is drawn such that $\angle BAX$ is an acute angle and then at equal distances, points are marked on the ray AX such that the minimum number of these points is

A. 8

B. 10

C. 11

D. 12

Answer: D

View Text Solution

25. To divide a line segment AB in the ratio $4:7$, a ray AX is drawn first such that $\angle BAX$ is an acute angle and then points A_1, A_2, A_3,.....are located at equal distances on the ray AX and the points B is joined to

A. A_{12}

B. A_{11}

C. A_{10}

D. A_9

Answer: B

View Text Solution

26. To draw a pair of tangents to a circle which are inclined to each other at an angle of 60°, it is required to draw tangents at end points of those two radii of the circle, the angle between them should be :

A. 135°

B. 90°

C. 60°

D. 120°

Answer: D

View Text Solution

27. To divide a line segment AB in the ratio p : q (p,q are positive integers), draw a ray AX such that $\angle BAX$ is an acute angle and then

mark points on ray AX at equal distance such that the minimum number of these points is

A. greater of p and q

B. $p + q$

C. $p + q - 1$

D. pq

Answer: B

View Text Solution

Assertion And Reasoning Based Questions

1. Assertion : By geometrical construction , it is possible to divide a line segment in the ratio of $\sqrt{3}:\frac{1}{\sqrt{3}}$.

Reason : A line segment can be divided internally in a given ratio M : N, where both M and N are positive integers.

A. Both the Assertion and the Reason are correct and Reason is the correct explanation of the Assertion.

B. Both the Assertion and the Reason are correct but Reason is not the correct explanation of the Assertion.

C. Assertion is true but Reason is false

D. Both Assertion and Reason are false.

Answer: A

View Text Solution

2. Assertion : A pair of tangents can be constructed to a circle inclined at an angle of 170°.

Reason : A pair of tangents can be constructed from a point P to a circle of radius 3.5 cm situated at a distance.

A. Both the Assertion and the Reason are correct and Reason is the correct explanation of the Assertion.

B. Both the Assertion and the Reason are correct but Reason is not the correct explanation of the Assertion.

C. Assertion is true but Reason is false

D. Both Assertion and Reason are false.

Answer: C

View Text Solution