CDS 1 2025

LIVE

MATHS

GEOMETRY

CLASS 6

NAVJYOTI SIR

Crack
EXAMS

12 Nov 2024 Live Classes Schedule

8:00AM	12 NOVEMBER 2024 DAILY CURRENT AFFAIRS	RUBY MA'AM
9:00AM	12 NOVEMBER 2024 DAILY DEFENCE UPDATES	DIVYANSHU SIR

SSB INTERVIEW LIVE CLASSES

9:30AM	OVERVIEW OF PIQ FORM & PERSONAL INTERVIE	ANURADHA MA'AM

NDA 1 2025 LIVE CLASSES

11:30AM	GK - MODERN HISTORY - CLASS 3	RUBY MA'AM
1:00PM	CHEMISTRY MCQ - CLASS 5	SHIVANGI MA'AM
4:00PM	MATHS - BINOMIAL THEOREM - CLASS 2	NAVJYOTI SIR
5:30PM	ENGLISH - ONE WORD SUBSTITUTION - CLASS 1	ANURADHA MA'AM

CDS 1 2025 LIVE CLASSES

11:30AM	GK - MODERN HISTORY - CLASS 3	RUBY MA'AM
1:00PM	CHEMISTRY MCQ - CLASS 5	SHIVANGI MA'AM
5:30PM	ENGLISH - ONE WORD SUBSTITUTION - CLASS 1	ANURADHA MA'AM
7:00PM	MATHS - GEOMETRY - CLASS 6	NAVJYOTI SIR

AFCAT 1 2025 LIVE CLASSES

5:30PM	ENGLISH - ONE WORD SUBSTITUTION - CLASS 1	ANURADHA MA'AM

SSBCrack EXAMS

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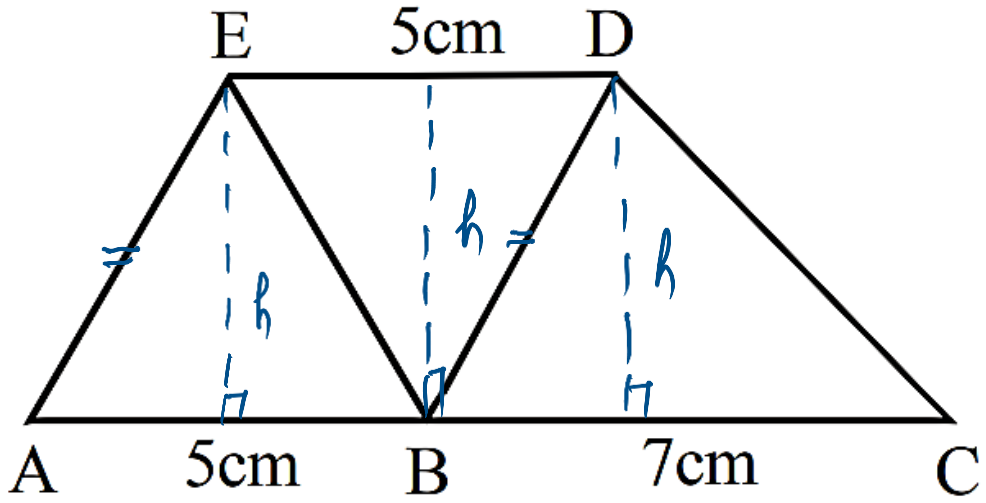
Q) In the figure given below, AC is parallel to ED and AB = DE = 5 cm and BC = 7 cm. What is the area ABDE : area BDE : area BCD equal to ?



(a) 10 : 5 : 7 ✓
(b) 8 : 4 : 7
(c) 2 : 1 : 2
(d) 8 : 4 : 5

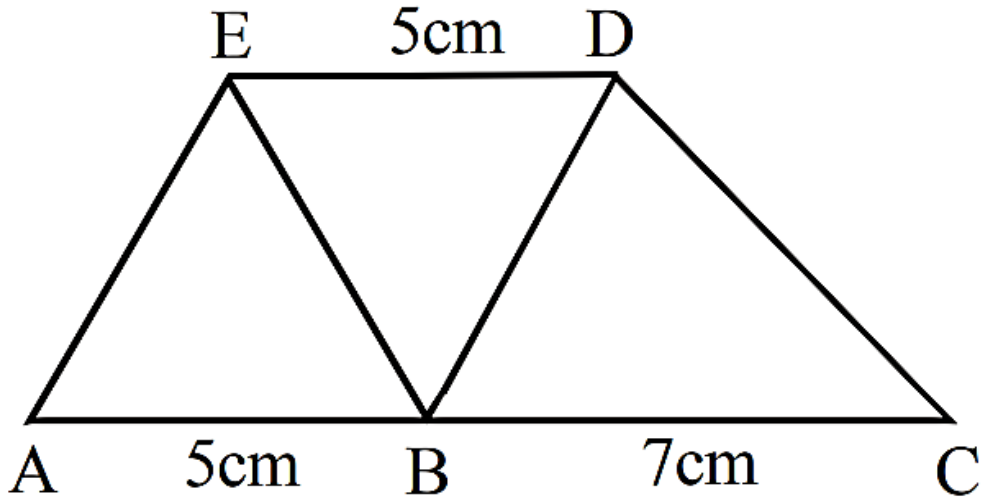
ABDE is a parallelogram.

$5 \times h : \frac{1}{2} \times 5 \times h : \frac{1}{2} \times 7 \times h$

$5 : \frac{5}{2} : \frac{7}{2}$

10 : 5 : 7

Q) In the figure given below, AC is parallel to ED and AB = DE = 5 cm and BC = 7 cm. What is the area ABDE : area BDE : area BCD equal to ?



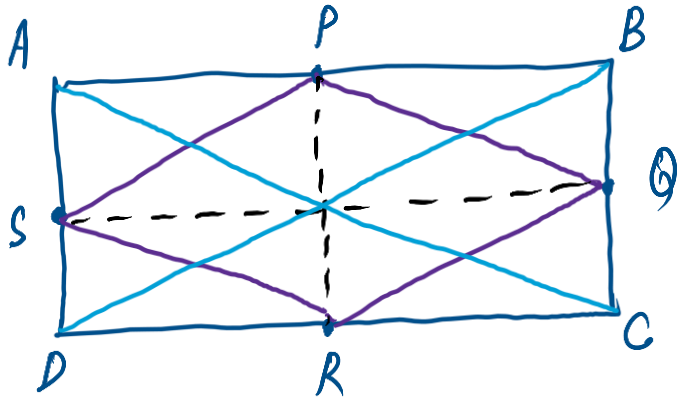
(a) 10 : 5 : 7
(b) 8 : 4 : 7
(c) 2 : 1 : 2
(d) 8 : 4 : 5

Ans: (a)

SSBCrack EXAMS

Q) Let ABCD be a rectangle. Let P, Q, R, S be the mid-points of sides AB, BC, CD, DA respectively. Then the quadrilateral PQRS is a

(a) Square ✗
(b) Rectangle, but need not be a square ✗
(c) Rhombus, but need not be a square ✓
(d) Parallelogram, but need not be a rhombus



$PQ = QR = RS = SP$ (as $AC = BD$)

$PR \neq QS$ ($PQRS$ is not a rectangle)

$\triangle ABC \rightarrow PQ \parallel AC \rightarrow PQ = \frac{1}{2} AC$

$\triangle ACD \rightarrow SR \parallel AC \rightarrow SR = \frac{1}{2} AC$

$\triangle ADB$ & $\triangle CDB$, $\Rightarrow SP = \frac{1}{2} BD$ & $QR = \frac{1}{2} BD$

Q) Let ABCD be a rectangle. Let P, Q, R, S be the mid-points of sides AB, BC, CD, DA respectively. Then the quadrilateral PQRS is a

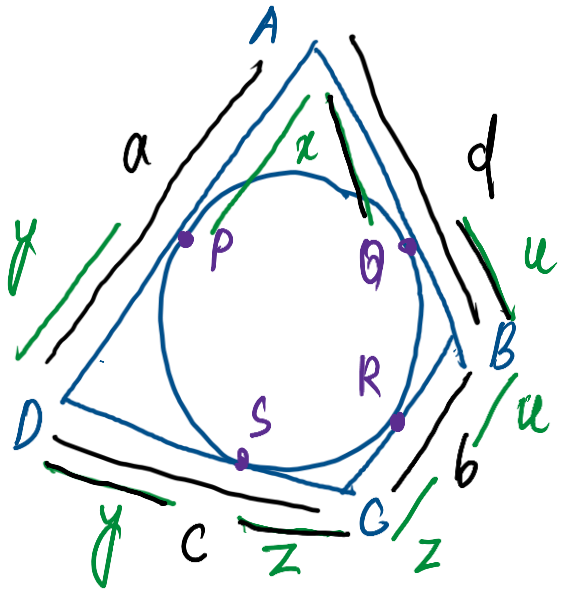
(a) Square
(b) Rectangle, but need not be a square
(c) Rhombus, but need not be a square
(d) Parallelogram, but need not be a rhombus

Ans: (c)

SSBCrack EXAMS

Q) If a quadrilateral has an inscribed circle, then the sum of a pair of opposite sides equals

(a) Half the sum of the diagonals
(b) Sum of the other pair of opposite sides ✓
(c) Sum of two adjacent sides
(d) None of the above



$a + b =$

$a = x + y$

$b = u + z$

$a + b = x + y + u + z$

$d + c$

Q) If a quadrilateral has an inscribed circle, then the sum of a pair of opposite sides equals

(a) Half the sum of the diagonals
(b) Sum of the other pair of opposite sides
(c) Sum of two adjacent sides
(d) None of the above

Ans: (b)

SSBCrack EXAMS

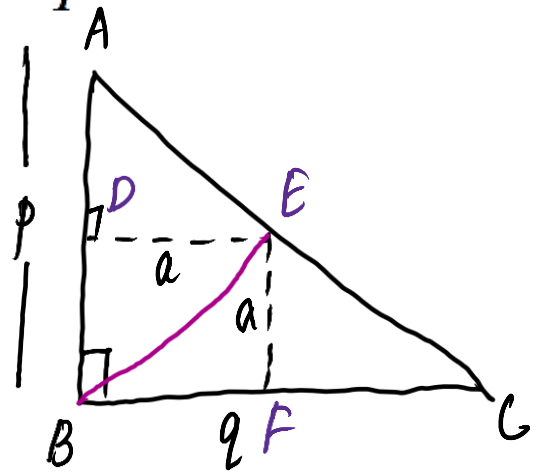
Q) A square is inscribed in a right-angled triangle with legs p and q, and has a common right angle with the triangle. The diagonal of the square is given by

(a) $\frac{pq}{p+2q}$

(b) $\frac{pq}{2p+q}$

(c) $\frac{\sqrt{2}pq}{p+q}$

(d) $\frac{2pq}{p+q}$



$ar(\triangle ABC) = ar(\triangle ADE) + ar(\triangle EFC) + ar(\text{square } DEFB)$

$a = \frac{pq}{p+q}$

$\sqrt{2}a$

$\frac{\sqrt{2}pq}{p+q}$

SSBCrack EXAMS

Q) A square is inscribed in a right-angled triangle with legs p and q, and has a common right angle with the triangle. The diagonal of the square is given by

(a) $\frac{pq}{p+2q}$

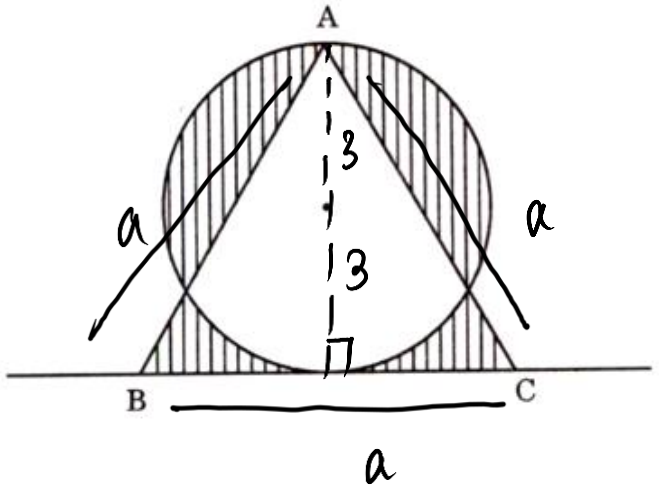
(b) $\frac{pq}{2p+q}$

(c) $\frac{\sqrt{2}pq}{p+q}$

(d) $\frac{2pq}{p+q}$

Ans: (c)

Consider a circle of area 9π square unit and an equilateral triangle ABC as shown in the figure given below.



What is the length of the side of the triangle ABC ?

PYQ – 2024 - I

(a) $2\sqrt{3}$ unit

(b) $4\sqrt{3}$ unit ✓

(c) $6\sqrt{3}$ unit

(d) $8\sqrt{3}$ unit

$\pi r^2 = 9\pi$

$r^2 = 9$

$r = 3$

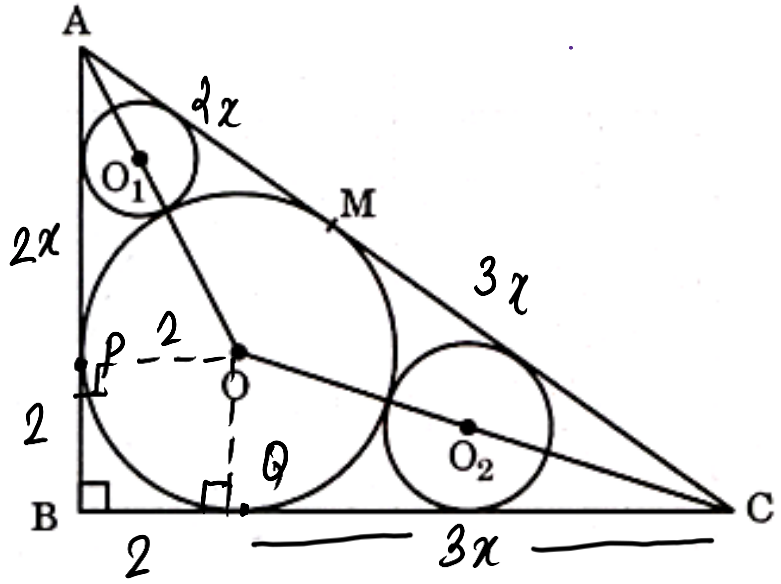
altitude = diameter

$\frac{\sqrt{3}}{2} a = 6$

$a = \frac{12}{\sqrt{3}} = 4\sqrt{3}$

PYQ – 2024 - I

ABC is a right-angled triangle with $\angle ABC = 90°$. The centre of the incircle of the given triangle is at O, whose radius is 2 cm. Two more circles with centres at O_1 and O_2, touch this circle and the two sides as shown in the figure given below.
Further, MA : MC = 2 : 3.



PQOB is a square

$AC = 5x$

$AB = 2x + 2$

$BC = 3x + 2$

$x = 2$;

10

6

8

$AB + BC = 6 + 8 = 14$ cm

What is AB + BC equal to ?

(a) 10 cm

(b) 12 cm

(c) 13 cm

(d) 14 cm

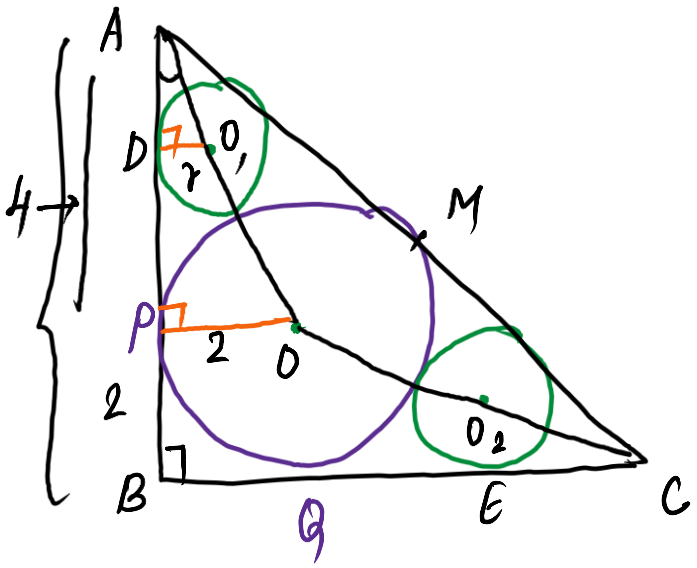
What is the radius of the circle with centre at O_1?

(a) $4 - \sqrt{5}$

(b) $1 + \sqrt{5}$

(c) $2 + \sqrt{5}$

(d) $3 - \sqrt{5}$ ✓

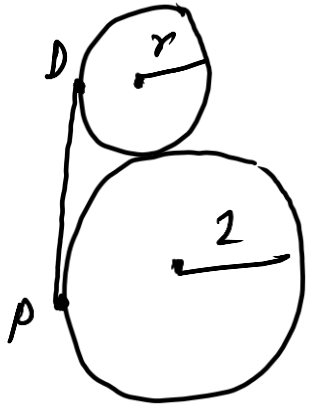


$\triangle ADO_1$ & $\triangle APO$ (AA similarity)

$$\frac{AD}{AP} = \frac{DO_1}{PO}$$

$$\frac{AP - DP}{4} = \frac{r}{2}$$

$$\frac{4 - 2\sqrt{2r}}{4} = \frac{r}{2}$$



Length of direct comm tangent

$$\sqrt{(r_1 + r_2)^2 - (r_1 - r_2)^2} = \sqrt{4r_1 r_2}$$

$$\frac{4-2\sqrt{2r}}{4} = \frac{r}{2}$$

$$8 - 4\sqrt{2r} = 4r$$

$$(8-4r)^2 = \left(4\sqrt{2r}\right)^2$$

$$64 - 64r + 16r^2 = 32r$$

$$16r^2 - 96r + 64 = 0$$

$$r^2 - 6r + 4 = 0$$

$$r = \frac{6 \pm \sqrt{36 - 4\times4\times1}}{2\times1}$$

$$= \frac{6 \pm \sqrt{20}}{2}$$

$$= 3 \pm \sqrt{5}$$

$$r = \frac{3+\sqrt{5}}{3-\sqrt{5}} \text{ or } \sqrt{5} \sim 2.25$$

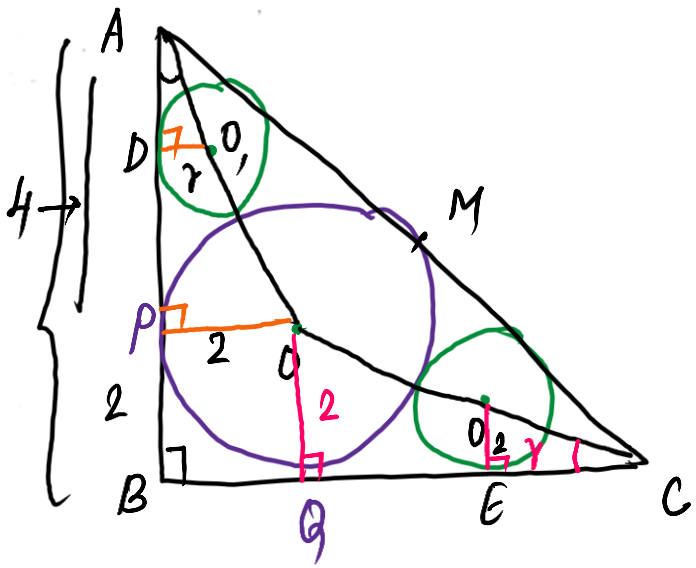
What is the radius of the circle with centre at O_2?

(a) $5 - \sqrt{10}$

(b) $1 + 2\sqrt{5}$

(c) $\frac{22 - 4\sqrt{10}}{9}$

(d) $\frac{22 - 2\sqrt{10}}{9}$



$\triangle CO_2E$ and $\triangle COQ$,

PYQ – 2024 - II

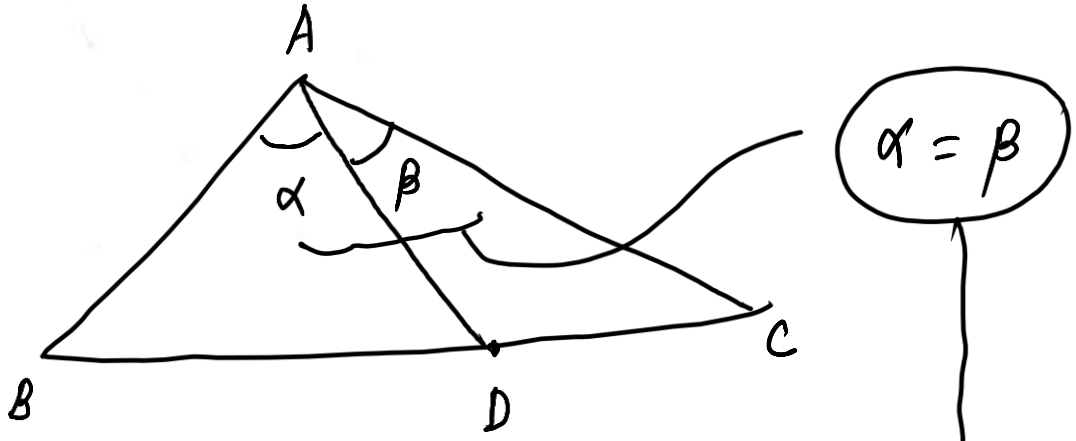
In a triangle ABC, D is a point on BC. If $AB \cdot DC = AC \cdot BD$, $\angle BAD = \alpha$ and $\angle CAD = \beta$ then which one of the following is correct ?

(a) $\alpha = \beta$ ✓

(b) $\alpha = 2\beta$

(c) $2\alpha = \beta$

(d) $2\alpha = 3\beta$



$\alpha = \beta$

$AB \cdot DC = AC \cdot BD$

$\triangle ABD$ $\triangle ADC$,

$\frac{AB}{BD} = \frac{AC}{CD} \Rightarrow$

Similar

PYQ – 2024 - II

If p, q and r are the lengths (in cm) of the sides of a right-angled triangle, then $(p-q-r)(q-r-p)(r-p-q)$ is always

(a) Positive only

(b) Negative only ✓

(c) Non-positive only

(d) Non-negative only

$\{p-(q+r)\}\{q-(r+p)\}\{r-(p+q)\}$

$-ve \quad -ve \quad -ve \longrightarrow -ve$

$p+q > r$

$q+r > r$

$r+p > q$

} Sum of two sides is greater than third side,

PYQ – 2024 - II

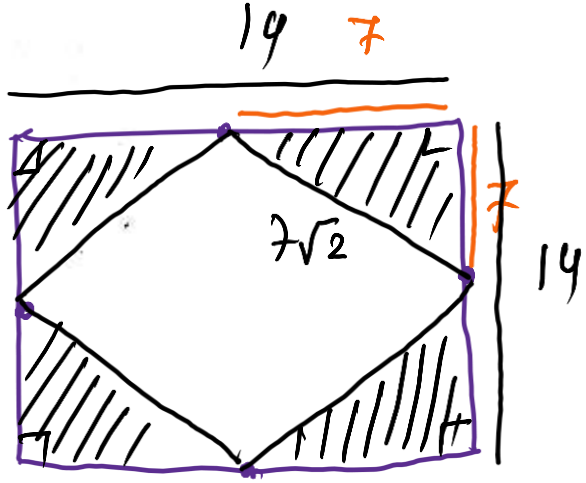
A square is drawn inside a square of side 14 cm in such a way that the corners of the inner square coincide with the mid points of the sides of the outer square. What is the area lying between the two squares ?

(a) 98 square cm

(b) 56 square cm

(c) 49 square cm

(d) 24·5 square cm



4 right triangles,

$4 \times \frac{1}{2} \times 7 \times 7 = 2 \times 49$

$= 98\ cm^2$

(OR)

$(14)^2 - (7\sqrt{2})^2$

$196 - 98 = 98\ cm^2$

PYQ – 2024 - II

Let MN be a chord of length 16 cm of a circle with centre at O and radius 10 cm. The tangents at M and N intersect at a point P. Further, OP intersects MN perpendicularly at Q.

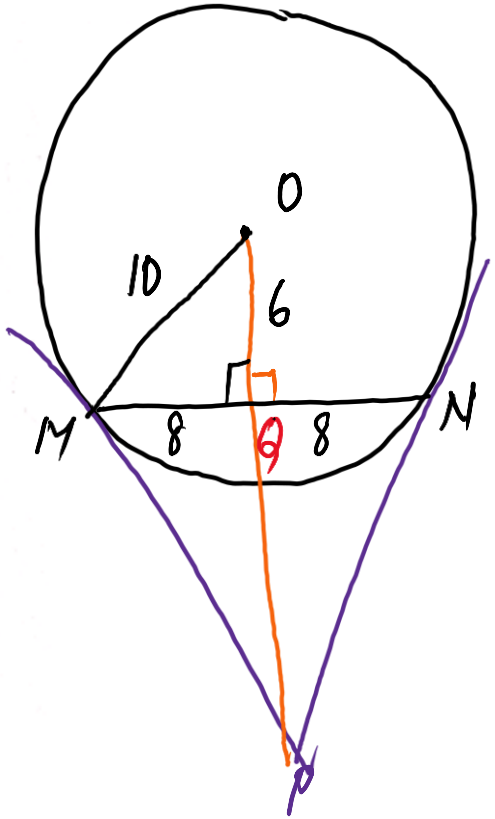
What is OQ equal to ?

(a) 5 cm

(b) 6 cm ✓

(c) 7 cm

(d) 8 cm



In right triangle OQM,

PYQ – 2024 - II

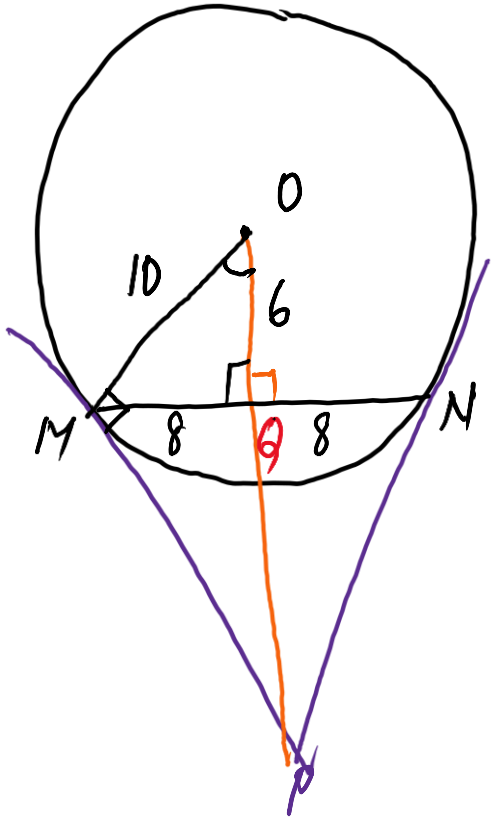
What is PM equal to ?

(a) 10 cm

(b) 12 cm

(c) $\frac{40}{3}$ cm ✓

(d) $\frac{50}{3}$ cm



$\triangle OQM$ and $\triangle OMP$,

(similar by AA)

$$\frac{OQ}{QM} = \frac{OM}{PM}$$

$$\frac{6}{8} = \frac{10}{PM}$$

$$PM = \frac{\cancel{10}^{5} \times 8}{\cancel{6}_{3}} = \frac{40}{3}$$

PYQ – 2024 - II

What is the area of triangle OMN ?

(a) 36 square cm

(b) 40 square cm

(c) 45 square cm

(d) 48 square cm

PYQ – 2024 - II

There are n concentric squares. The area of the innermost square is 1 unit and the distance between corresponding corners of any two consecutive squares is 1 unit. Consider the following statements :

I. The diagonal of the nth square is $2n + \sqrt{2} - 2$ ✓

II. The area included between nth square and $(n-1)$th square is independent of n ✓

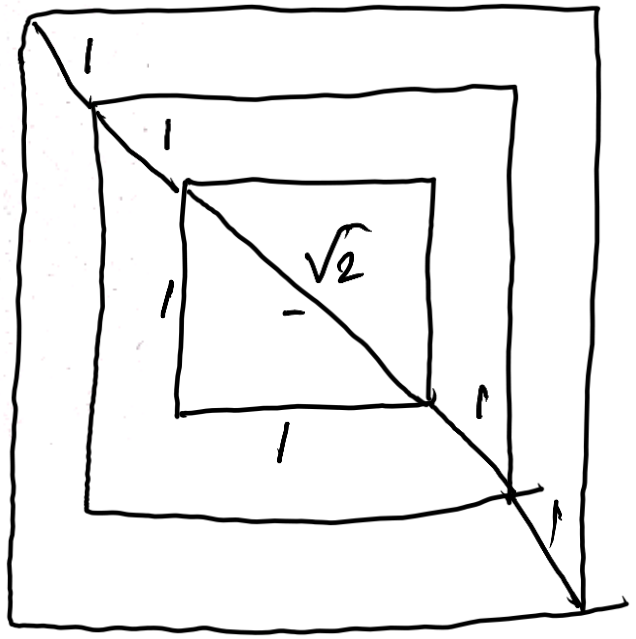
Which of the statements given above is/are correct ?

(a) I only ✓

(b) II only

(c) Both I and II

(d) Neither I nor II



(1) $\sqrt{2} + 2(n-1)$

$1 \longrightarrow \sqrt{2}$

$2 \longrightarrow \sqrt{2} + 2$

$3 \longrightarrow \sqrt{2} + 2 + 2 = \sqrt{2} + 4$

PYQ – 2024 - II

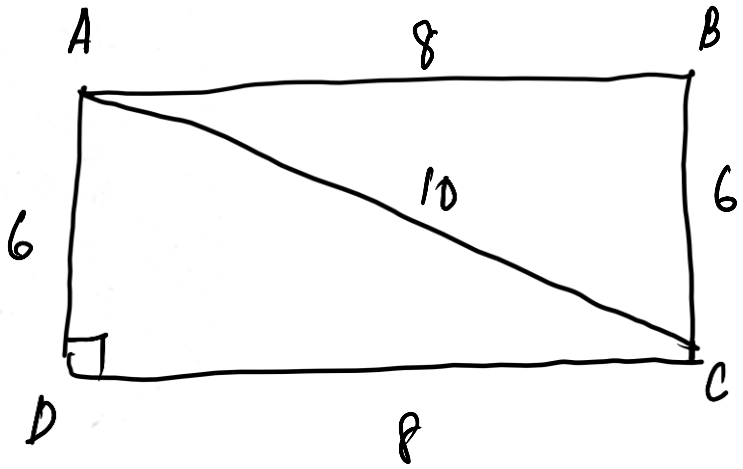
In a rectangle $ABCD$, AC is one of the diagonals. If $AC + AB = 3AD$ and $AC - AD = 4$ units, then what is the area of the triangle ?

(a) 24 square unit

(b) 36 square unit

(c) 48 square unit

(d) 72 square unit



$\frac{1}{2} \times 6 \times 8 = 24$ sq. units

Q) The area of a rhombus with side 13cm and one diagonal 10 cm will be

(a) 140 square cm
(b) 130 square cm
(c) 120 square cm
(d) 110 square cm

Q) The area of a rhombus with side 13cm and one diagonal 10 cm will be

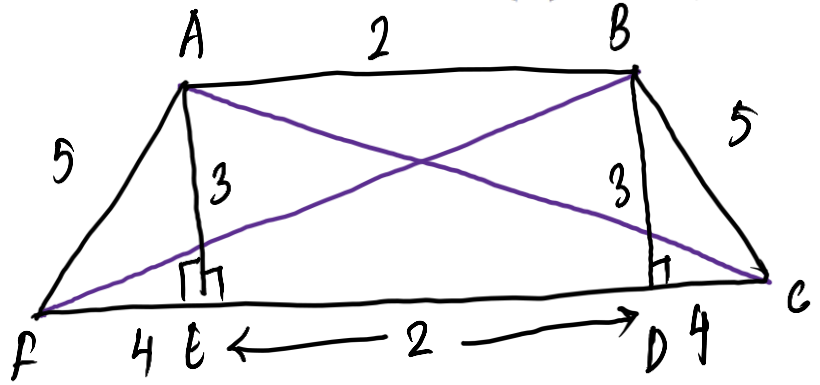
(a) 140 square cm
(b) 130 square cm
(c) 120 square cm
(d) 110 square cm

Ans: (c)

Q) In a trapezium, the two non-parallel sides are equal in length, each being of 5 cm. The parallel sides are at a distance of 3 cm apart. If the smaller side of the parallel sides is of length 2 cm, then the sum of the diagonals of the trapezium is

(a) $10\sqrt{5}$ cm (b) $6\sqrt{5}$ cm ✓

(c) $5\sqrt{5}$ cm (d) $3\sqrt{5}$ cm



$\triangle AEC$,

$AC^2 = 3^2 + 6^2 = 45$

$AC = 3\sqrt{5}$

$\triangle BDF$,

$BF^2 = 3^2 + 6^2 = 45$

$BF = 3\sqrt{5}$

SSBCrack EXAMS

Q) In a trapezium, the two non-parallel sides are equal in length, each being of 5 cm. The parallel sides are at a distance of 3 cm apart. If the smaller side of the parallel sides is of length 2 cm, then the sum of the diagonals of the trapezium is

(a) $10\sqrt{5}$ cm

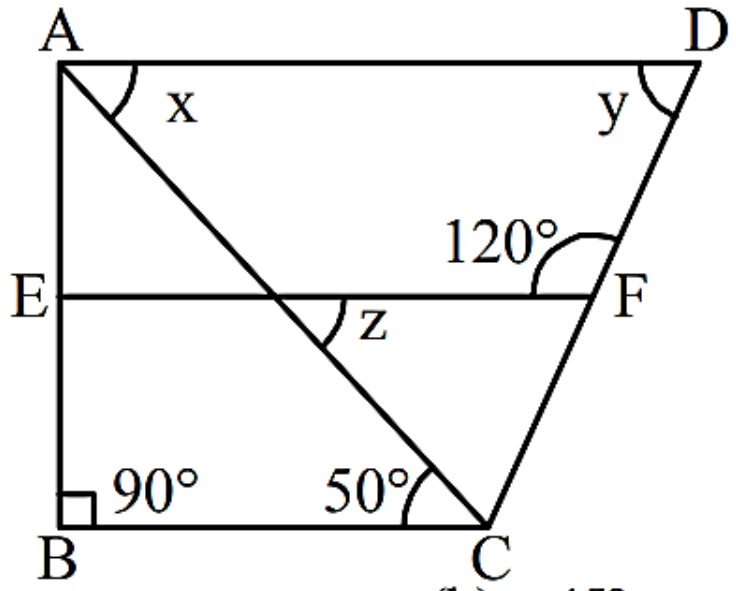
(b) $6\sqrt{5}$ cm

(c) $5\sqrt{5}$ cm

(d) $3\sqrt{5}$ cm

Ans: (b)

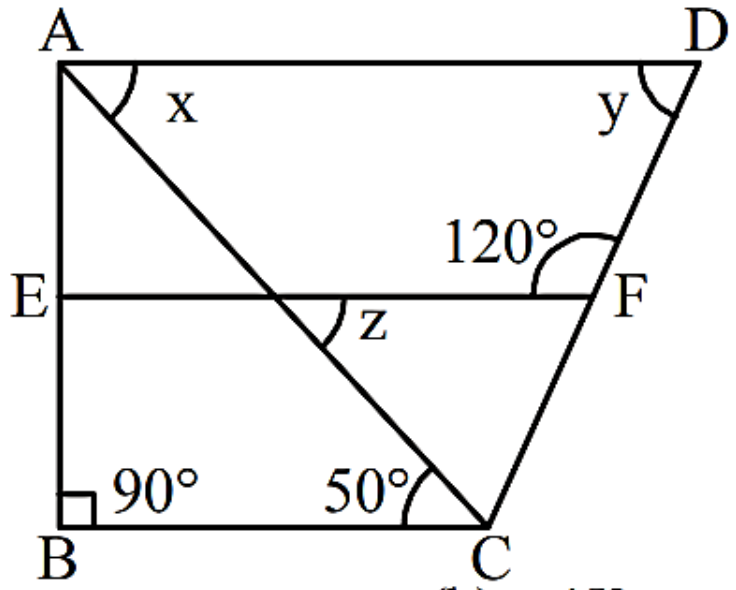
Q) In the figure given above, $ABCD$ is a trapezium. EF parallel to AD and BG. $\angle y$ is equal to



(a) 30°
(b) 45°
(c) 60°
(d) 65°

SSBCrack EXAMS

Q) In the figure given above, $ABCD$ is a trapezium. EF parallel to AD and BG. $\angle y$ is equal to



(a) 30°
(b) 45°
(c) 60°
(d) 65°

Ans: (c)

SSBCrack EXAMS

Q) $ABCD$ is a trapezium with parallel sides $AB = 2$ cm and $DC = 3$ cm. E and F are the mid-points of the non-parallel sides. The ratio of area of $ABFE$ to area of $EFCD$ is

(a) 9 : 10
(b) 8 : 9
(c) 9 : 11
(d) 11 : 9

SSBCrack EXAMS

Q) $ABCD$ is a trapezium with parallel sides $AB = 2$ cm and $DC = 3$ cm. E and F are the mid-points of the non-parallel sides. The ratio of area of $ABFE$ to area of $EFCD$ is

(a) 9 : 10
(b) 8 : 9
(c) 9 : 11
(d) 11 : 9

Ans: (c)

SSBCrack EXAMS

Q) If the diagonals of a quadrilateral are equal and bisect each other at right angles, then the quadrilateral is a

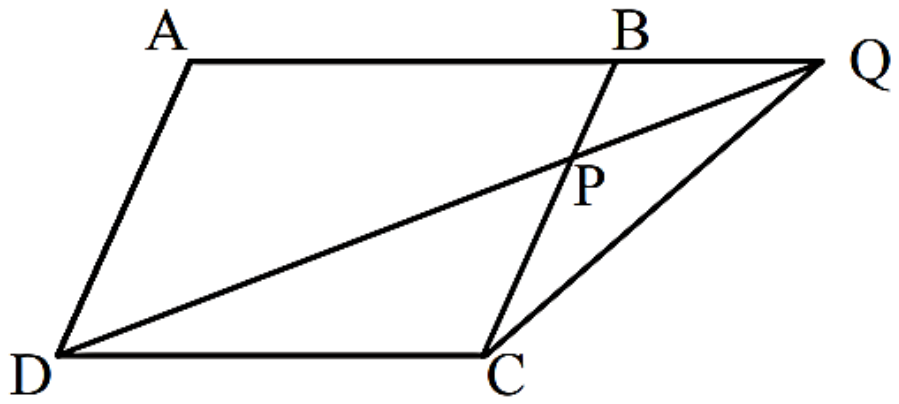
(a) rectangle
(b) square
(c) rhombus
(d) trapezium

Q) If the diagonals of a quadrilateral are equal and bisect each other at right angles, then the quadrilateral is a

(a) rectangle
(b) square
(c) rhombus
(d) trapezium

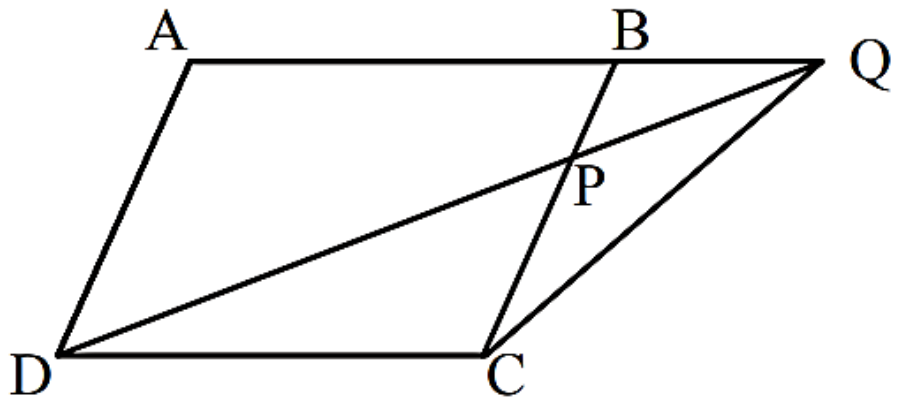
Ans: (b)

Q) In the figure given below, $ABCD$ is a parallelogram. P is a point in BC such that $PB : PC = 1 : 2$. DP produced meets AB produced at Q. If the area of the ΔBPQ is 20 sq units, what is the area of the ΔDCP?



(a) 20 sq units
(b) 30 sq units
(c) 40 sq units
(d) None of these

Q) In the figure given below, $ABCD$ is a parallelogram. P is a point in BC such that $PB : PC = 1 : 2$. DP produced meets AB produced at Q. If the area of the ΔBPQ is 20 sq units, what is the area of the ΔDCP?

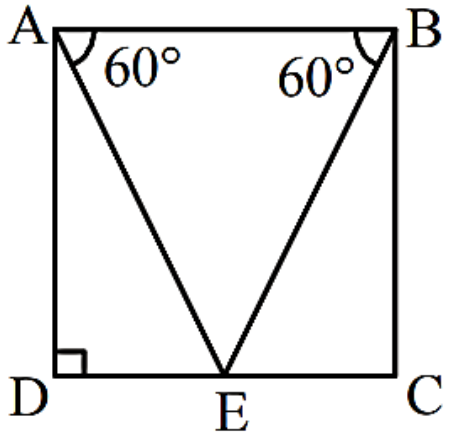


(a) 20 sq units
(b) 30 sq units
(c) 40 sq units
(d) None of these

Ans: (d)

SSBCrack EXAMS

Q) In the given figure, $ABCD$ is a quadrilateral with AB parallel to DC and AD parallel to BC, ADC is a right angle. If the perimeter of the ΔABE is 6 units. What is the area of the quadrilateral ?



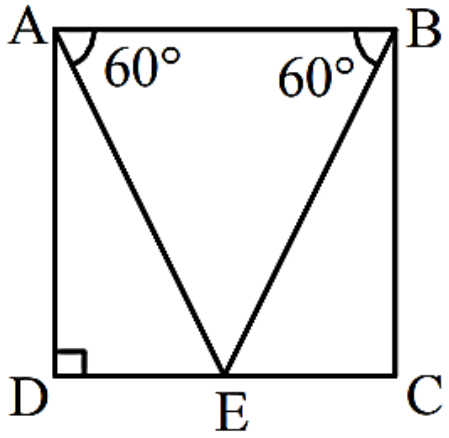
(a) $2\sqrt{3}$ sq units

(b) 4 sq units

(c) 3 sq units

(d) $4\sqrt{3}$ sq units

Q) In the given figure, $ABCD$ is a quadrilateral with AB parallel to DC and AD parallel to BC, ADC is a right angle. If the perimeter of the ΔABE is 6 units. What is the area of the quadrilateral ?

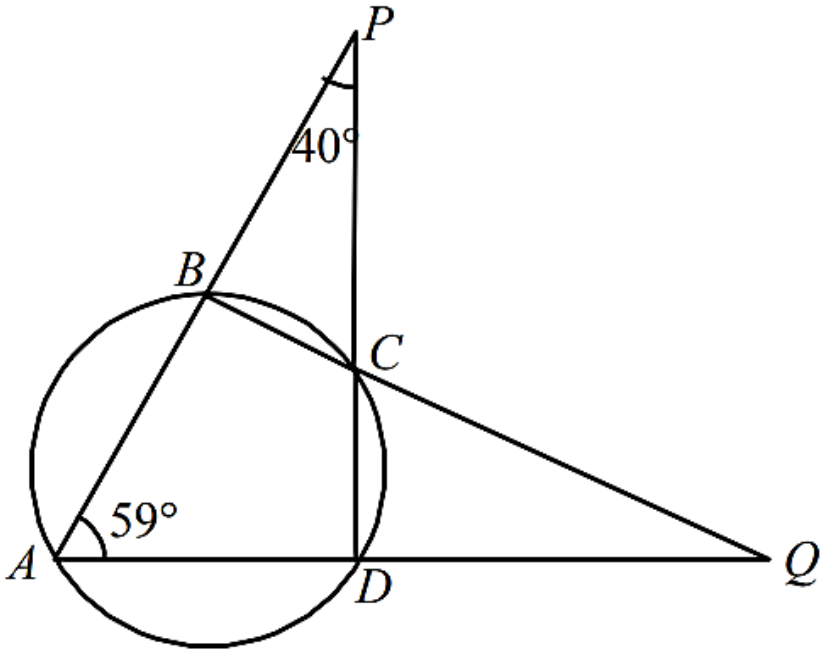


(a) $2\sqrt{3}$ sq units (b) 4 sq units

(c) 3 sq units (d) $4\sqrt{3}$ sq units

Ans: (a)

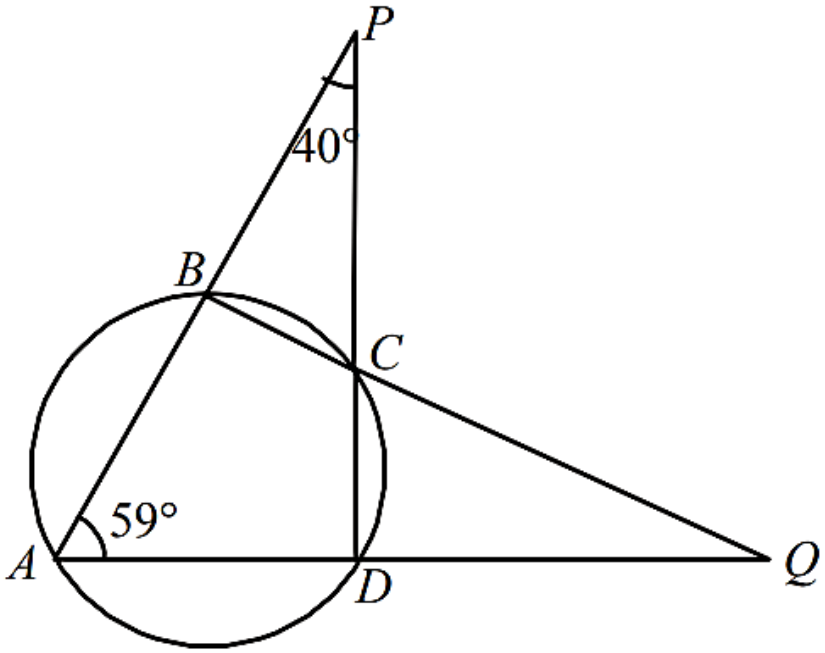
Q)



In the given figure, if $\angle PAQ = 59°$, $\angle APD = 40°$, then what is $\angle AQB$?

(a) 19°
(b) 20°
(c) 22°
(d) 27°

Q)



In the given figure, if $\angle PAQ = 59°$, $\angle APD = 40°$, then what is $\angle AQB$?

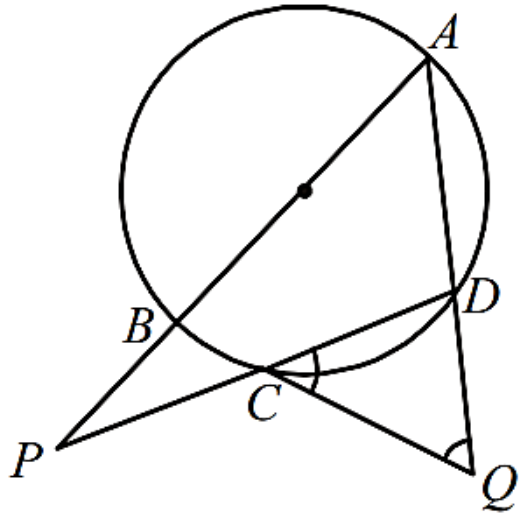
(a) 19° (b) 20°

(c) 22° (d) 27°

Ans: (c)

SSBCrack EXAMS

Q) In the given figure, if $\frac{x}{3}=\frac{y}{4}=\frac{z}{5}$, where $\angle DCQ = x$, $\angle BPC = y$ and $\angle DQC = z$, then what are the values of x, y and z, respectively?



(a) 33°, 44° and 55°
(b) 36°, 48° and 60°
(c) 39°, 52° and 65°
(d) 42°, 56° and 70°

SSBCrack EXAMS

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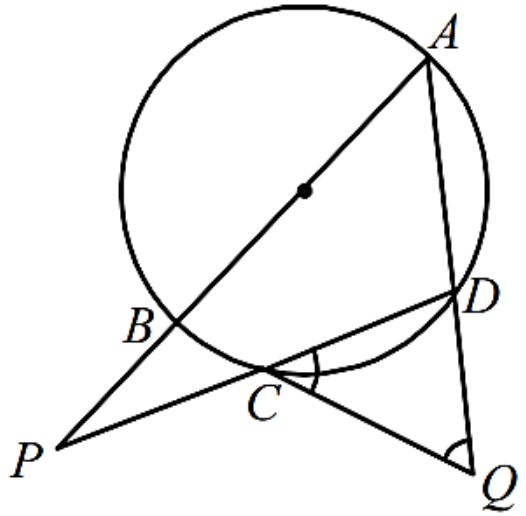
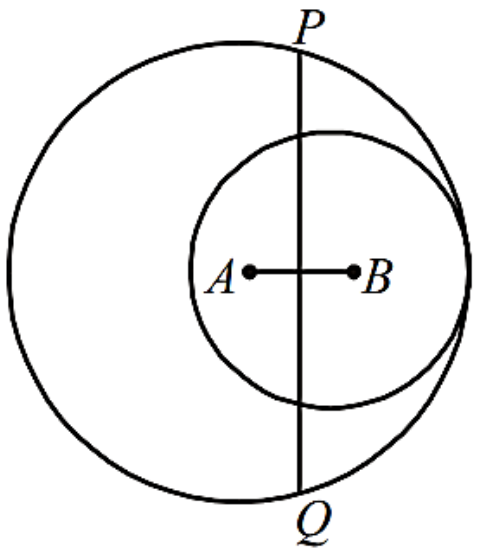


(a) 33°, 44° and 55°
(b) 36°, 48° and 60°
(c) 39°, 52° and 65°
(d) 42°, 56° and 70°

Ans: (b)

Q)



Two circles with centres A and B touch each other internally, as shown in the figure given above. Their radii are 5 and 3 units, respectively. Perpendicular bisector of AB meets the bigger circle in P and Q. What is the length of PQ?

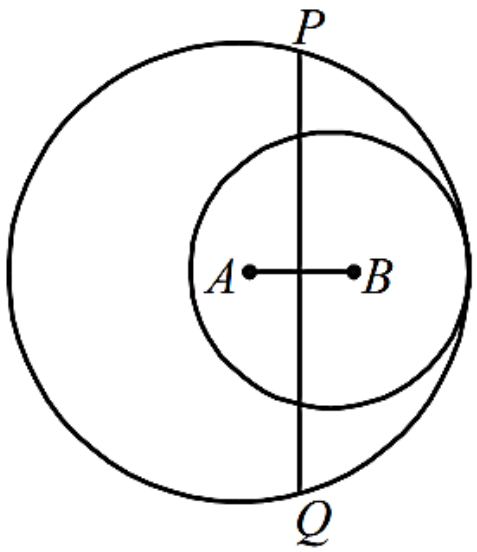
(a) $2\sqrt{6}$

(b) $\sqrt{34}$

(c) $4\sqrt{6}$

(d) $6\sqrt{2}$

Q)



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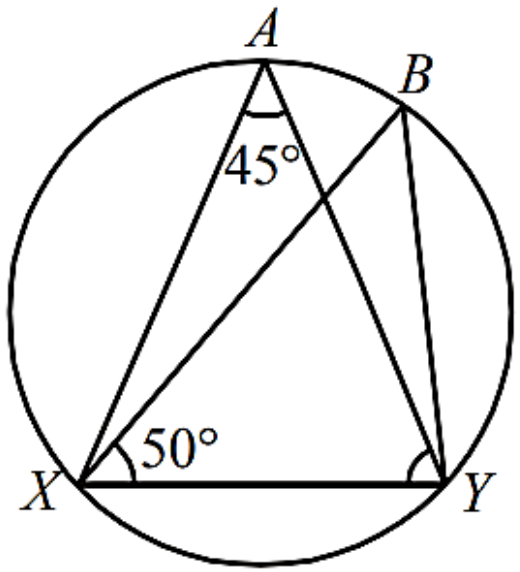
(c) $4\sqrt{6}$ (d) $6\sqrt{2}$

Ans: (c)

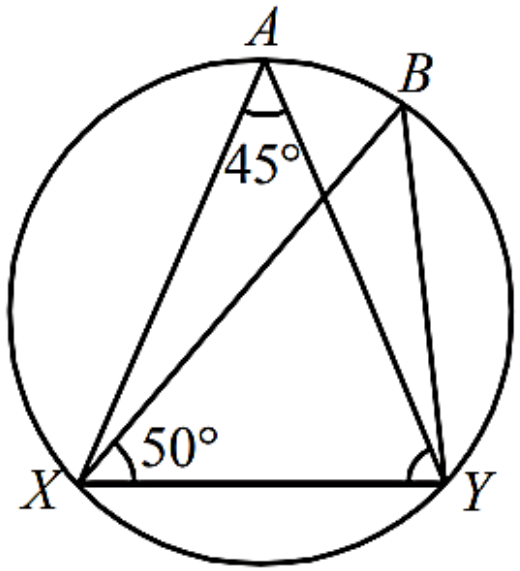
Q)



In the figure given above, what is $\angle BYX$ equal to?

(a) 85°
(b) 50°
(c) 45°
(d) 90°

Q)

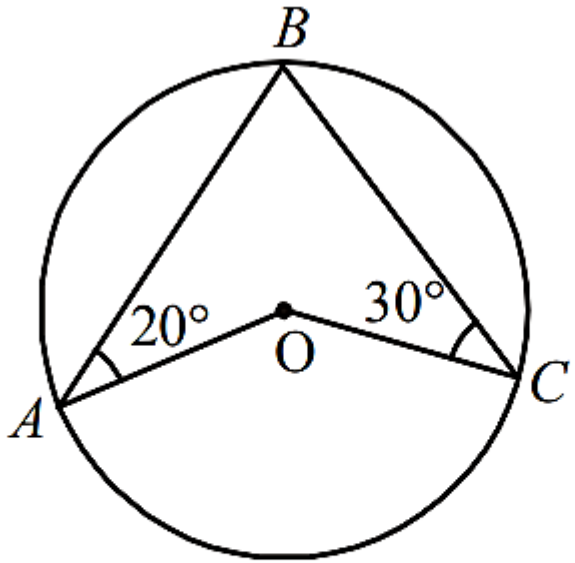


In the figure given above, what is $\angle BYX$ equal to?

(a) 85°
(b) 50°
(c) 45°
(d) 90°

Ans: (a)

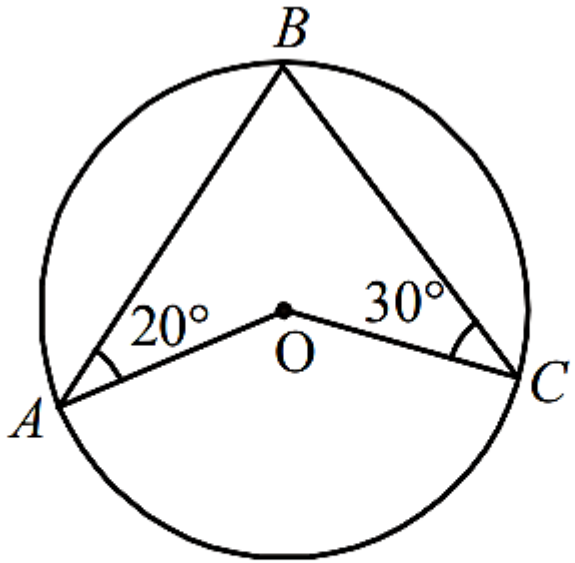
Q)



In the figure given above, O is the centre of the circle. What is $\angle AOC$?

(a) 160°
(b) 150°
(c) 120°
(d) 100°

Q)



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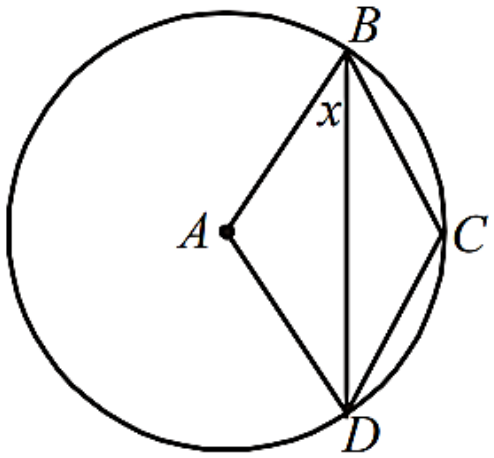


In the figure given above, A is the centre of the circle and $AB = BC = CD$. What is the value of x?

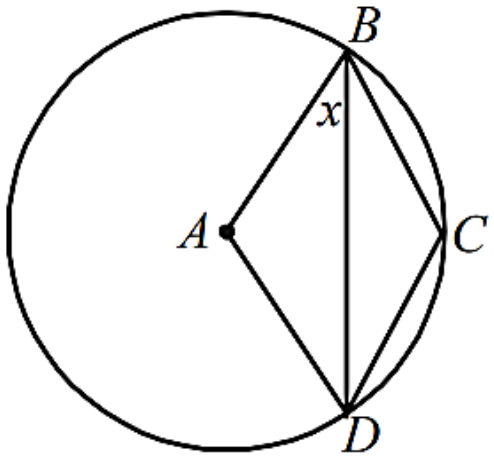
(a) $20°$

(b) $22\frac{1}{2}°$

(c) $25°$

(d) None of these

Q)



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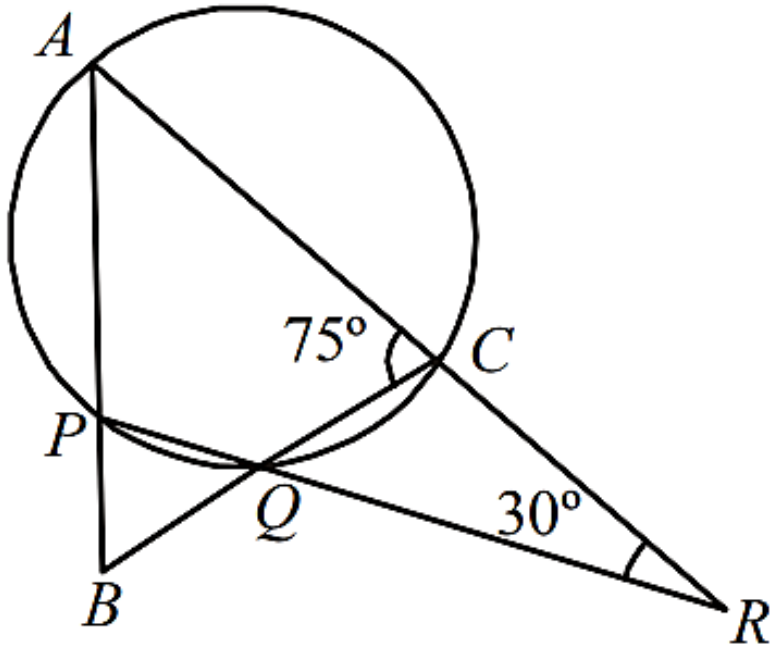
(d) None of these

Ans: (d)

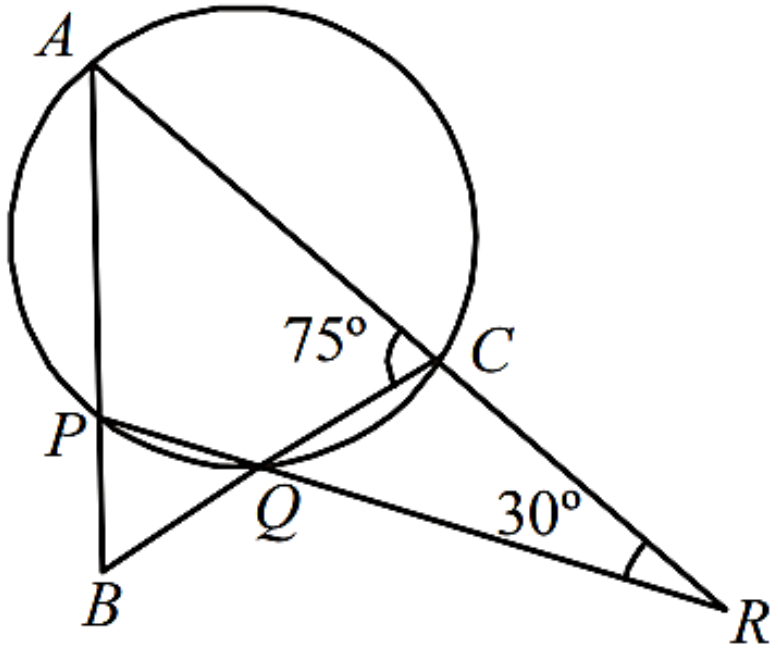
Q)



In the figure given above, what is $\angle CBA$?

(a) 30°
(b) 45°
(c) 50°
(d) 60°

Q)



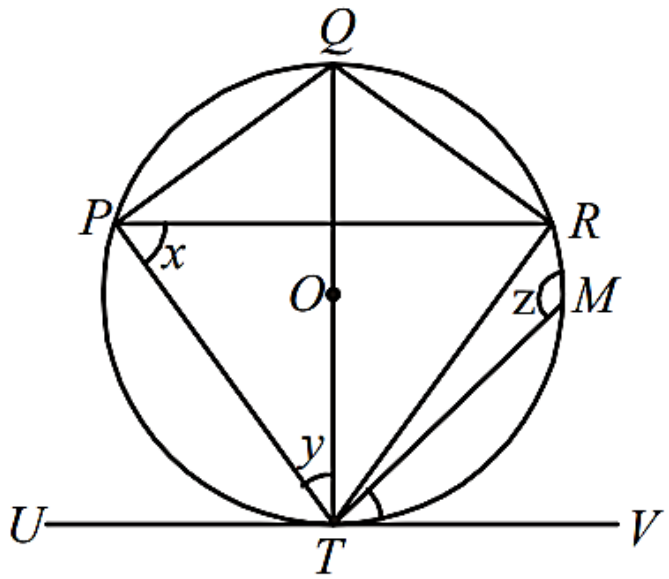
In the figure given above, what is $\angle CBA$?

(a) 30° (b) 45°

(c) 50° (d) 60°

Ans: (d)

Q)

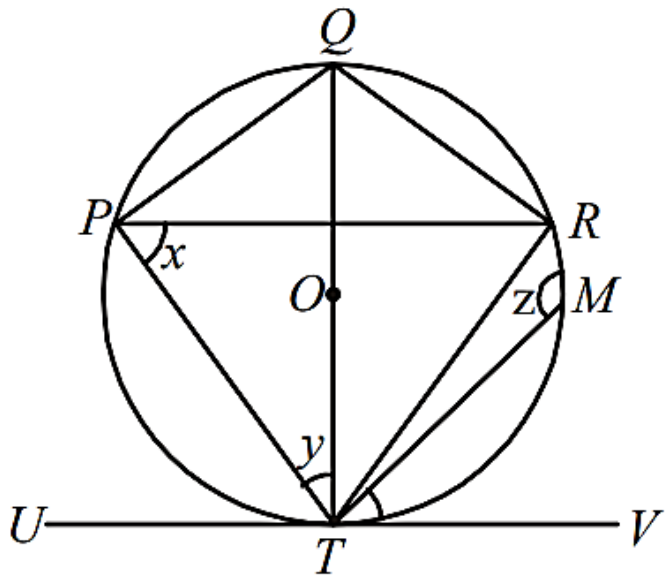


In the figure given above, O is the centre of the circle. The line UTV is a tangent to the circle at T, $\angle VTR = 52°$ and ΔPTR is an isosceles triangle such that $TP = TR$. What is $\angle x + \angle y + \angle z$ equal to?

(a) 175° (b) 208°
(c) 218° (d) 250°

SSBCrack EXAMS

Q)



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(a) 175° (b) 208°
(c) 218° (d) 250°

Ans: (c)

SSBCrack EXAMS

Q) A circle of radius 10 cm has an equilateral triangle inscribed in it. The length of the perpendicular drawn from the centre to any side of the triangle is

(a) $2.5\sqrt{3}$ cm

(b) $5\sqrt{3}$ cm

(c) $10\sqrt{3}$ cm

(d) None of these

SSBCrack EXAMS

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(a) $2.5\sqrt{3}$ cm

(b) $5\sqrt{3}$ cm

(c) $10\sqrt{3}$ cm

(d) None of these

Ans: (d)

Q) AC is the diameter of the circumcircle of the cyclic quadrilateral $ABCD$. If $\angle BDC = 42°$, then what is $\angle ACB$ equal to?

(a) $42°$ (b) $45°$

(c) $48°$ (d) $58°$

Q) AC is the diameter of the circumcircle of the cyclic quadrilateral $ABCD$. If $\angle BDC = 42°$, then what is $\angle ACB$ equal to?

(a) 42° (b) 45°

(c) 48° (d) 58°

Ans: (c)

SSBCrack EXAMS

Q) A tangent is drawn from an external point D to a circle of radius 3 units at P such that DP = 4 units. If O is the centre of the circle, the the sine of the angle ODP is

(a) 4/5
(b) 3/4
(c) 3/5
(d) 1/2

SSBCrack EXAMS

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(a) 4/5 (b) 3/4

(c) 3/5 (d) 1/2

Ans: (c)

SSBCrack EXAMS

Q) ABC is an equilateral triangle. The side BC is trisected at D such that $BC = 3\ BD$. What is the ratio of AD^2 to AB^2?

(a) 7 : 9 (b) 1 : 3 (c) 5 : 7 (d) 1 : 2

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(a) 7 : 9 (b) 1 : 3 (c) 5 : 7 (d) 1 : 2

Ans: (a)

SSBCrack EXAMS

Q) Out of two concentric circles, the diameter of the outer circle is 26 cm and the chord MN of length 24cm is tangent to the inner circle. The radius of the inner circle is

(a) 5 cm
(b) 6 cm
(c) 8 cm
(d) 10 cm

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(a) 5 cm
(b) 6 cm
(c) 8 cm
(d) 10 cm

Ans: (a)

SSBCrack EXAMS

Q) Two circles, each of radius r, with centres P and Q, are such that each circle passes through the centre of the other circle. Then the area common to the circles is less than one-third of the sum of the areas of the two circles by

(a) $\frac{\sqrt{3}r^2}{4}$

(b) $\frac{\sqrt{3}r^2}{3}$

(c) $\frac{\sqrt{3}r^2}{2}$

(d) $\sqrt{3}r^2$

SSBCrack EXAMS

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(b) $\frac{\sqrt{3}r^2}{3}$

(c) $\frac{\sqrt{3}r^2}{2}$

(d) $\sqrt{3}r^2$

Ans: (c)

SSBCrack EXAMS

Q) In a ΔABC, $AB = BC = CA$. The ratio of the radius of the circumcircle to that of the incircle is

(a) 2 : 1
(b) 3 : 1
(c) 3 : 2
(d) None of these

Q) In a ΔABC, $AB = BC = CA$. The ratio of the radius of the circumcircle to that of the incircle is

(a) 2 : 1
(b) 3 : 1
(c) 3 : 2
(d) None of these

Ans: (a)

SSBCrack EXAMS

Q) An equilateral triangle BOC is drawn inside a square ABCD. If angle AOD= 2θ, what is $\tan\theta$ equal to ?

(a) $2-\sqrt{3}$

(b) $1+\sqrt{2}$

(c) $4-\sqrt{3}$

(d) $2+\sqrt{3}$

Q) An equilateral triangle BOC is drawn inside a square ABCD.
If angle AOD= 2θ, what is tanθ equal to ?

(a) $2-\sqrt{3}$ (b) $1+\sqrt{2}$

(c) $4-\sqrt{3}$ (d) $2+\sqrt{3}$

Ans: (d)

SSBCrack EXAMS

Q) Suppose ABC is a triangle with AB of unit length D and E are the points lying on AB and AC respectively such that BC and DE are parallel. If the area of triangle ABC is twice the area of triangle ADE, then the length of AD is

(a) $\frac{1}{2}$ unit

(b) $\frac{1}{3}$ unit

(c) $\frac{1}{\sqrt{2}}$ unit

(d) $\frac{1}{\sqrt{3}}$ unit

SSBCrack EXAMS

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(a) $\frac{1}{2}$ unit

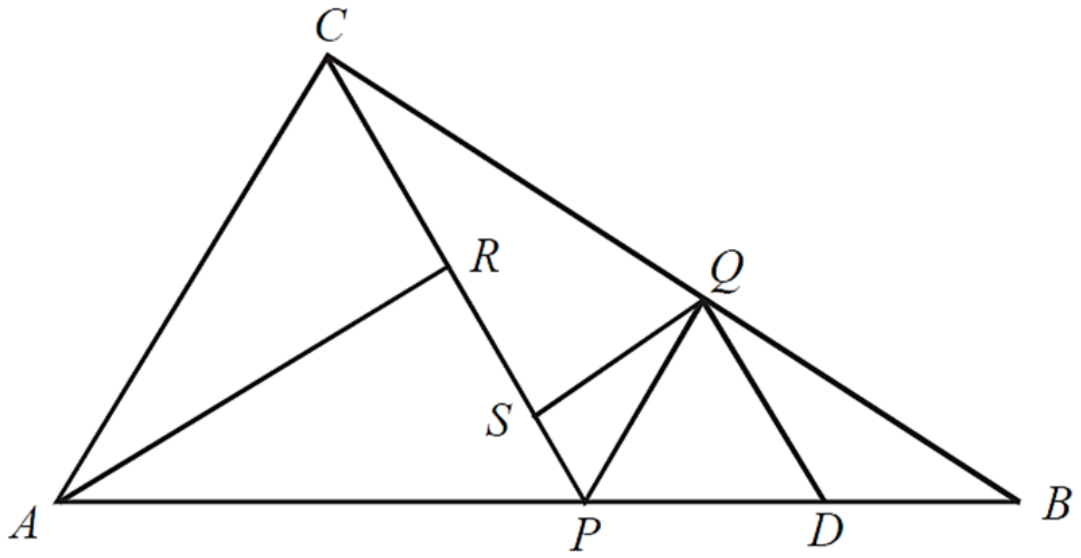
(b) $\frac{1}{3}$ unit

(c) $\frac{1}{\sqrt{2}}$ unit

(d) $\frac{1}{\sqrt{3}}$ unit

Ans: (c)

Q) In the figure (not drawn to scale) given below, P is a point on AB such that $AP : PB = 4 : 3$. PQ is parallel to AC and QD is parallel to CP. In ΔARC, $\angle ARC = 90°$, and in ΔPQS, $\angle PSQ = 90°$. The length of QS is 6 cms. What is ratio $AP : PD$?



(a) 10 : 3
(b) 2 : 1
(c) 7 : 3
(d) 8 : 3

SSBCrack EXAMS

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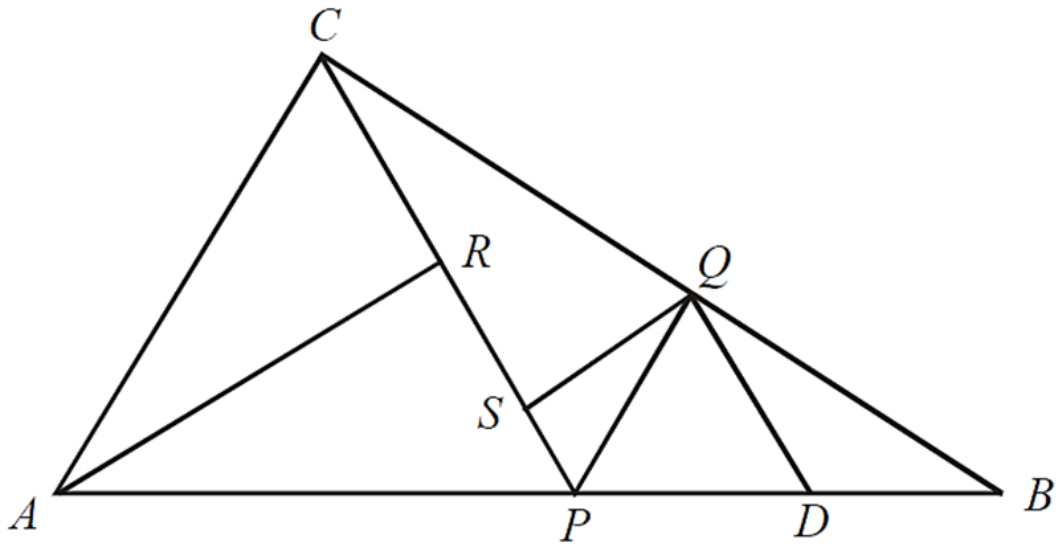

(a) 10 : 3
(b) 2 : 1
(c) 7 : 3
(d) 8 : 3

Ans: (c)

SSBCrack EXAMS

Q) Let S be an arbitrary point on the side PQ of an a cute angle ΔPQR. Let T be the point of intersection of QR extended with the straight line PT drawn parallel to SR through P. Let U be the point of intersection of PR extended with the straight line QU drawn parallel to SR through Q. If $PT = a$ and $QU = b$, then the length of SR is

(a) $\frac{a+b}{ab}$

(b) $\frac{a-b}{ab}$

(c) $\frac{ab}{a+b}$

(d) $\frac{ab}{a-b}$

SSBCrack EXAMS

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(a) $\frac{a+b}{ab}$

(b) $\frac{a-b}{ab}$

(c) $\frac{ab}{a+b}$

(d) $\frac{ab}{a-b}$

Ans: (c)

Q)In a right angled $\Delta ABC, \angle C = 90^\circ$ and CD is perpendicular to AB. If $AB \times CD = CA \times CB$, then $\frac{1}{CD^2}$ is equal to

(a) $\frac{1}{AB^2} - \frac{1}{CA^2}$

(b) $\frac{1}{AB^2} - \frac{1}{CB^2}$

(c) $\frac{1}{BC^2} + \frac{1}{CA^2}$

(d) $\frac{1}{BC^2} - \frac{1}{CA^2}$, if $CA > CB$

Q)In a right angled $\Delta ABC, \angle C = 90^\circ$ and CD is perpendicular to AB. If $AB \times CD = CA \times CB$, then $\frac{1}{CD^2}$ is equal to

(a) $\frac{1}{AB^2} - \frac{1}{CA^2}$

(b) $\frac{1}{AB^2} - \frac{1}{CB^2}$

(c) $\frac{1}{BC^2} + \frac{1}{CA^2}$

(d) $\frac{1}{BC^2} - \frac{1}{CA^2}$, if $CA > CB$

Ans: (c)

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LIVE

MATHS

MENSURATION 3D

CLASS 1

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