SAMAGRA
Department of General Education Kerala

Question Bank

Mathematics

English Medium

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Class Type:
SSE

Class:
X

Subject:
Mathematics

Language:
English

Chapter:
Samanthara Srenikal

Subtitle:
Select

Chapter Name:Samanthara Srenikal *Marks :(3)*

Quest:
a) Write a sequence by adding 3 with the multiples of 7.

b) Write its algebraic form.

c) Is 2000 a term of this sequence ?

Hint:
a) 10, 17, 24 .... (1)

b) 7n+3 (1)

c) $\frac{2000-3}{7}$ is not a natural number. So 2000 is not a term (1)

Chapter Name:Samanthara Srenikal *Marks :(3)*

Quest:
The common difference of two arithmetic sequence are equal. The difference between their first terms is 10.

a) What is the difference between the second terms ?

b) What is the difference between the nth terms ?

c) What is the difference between the sums of first n terms ?

Hint:
a) 10 (1)

b) 10 (1)

c) 10 x n = 10n (1)

Chapter Name:Samanthara Srenikal *Marks :(4)*

Quest:
The sum of first n terms of an arithmetic sequence is $3n^2 + 4n$

a) What is its first term ?

b) Write the algebraic form of the sequence.

c) Find the 20th term.

Hint:
a) 3+4 = 7 (1)

b) 6n + (7-6) = 6n+1 (2)

d) 6 x 20 +1 = 121 (1)

Chapter Name:Samanthara Srenikal *Marks :(2)*

Quest:
Is 44 a term of the sequence 4n + 3 ? Why ?

Hint:
4 x 10 +3 = 43.

44 is not a term (2)

Chapter Name:Samanthara Srenikal *Marks :(2)*

Quest:
In the arithmetic sequence 6,10,14,..

a) How much more is the 15th term than the 10th term ?

b) Which term is 32 more than the 20th term ?

Hint:
a) 5 x 4 = 20 (1)

b) 28th term (1)

Chapter Name:Samanthara Srenikal *Marks :(2)*

Quest:
The commom difference of an arithmetic sequence is 6 and its 9th term is zero.

a) Write the 8th and 10th term.

b) Find the sum of its first 17 terms.

Hint:

a) -6, 6 (1)

b) 17 x 0 = 0 (1)

Chapter Name:Samanthara Srenikal *Marks :(4)*

Quest:

16th term of an arithmetic sequence is 60 and its 26th term is 90.

a) What is the differece between the 16th term and 26th term ?

b) What is the common difference?

c) Write the sequence

Hint:

a) 90-60 =30 (1)

b) $\frac{90-60}{10}$ =3 (1)

c) First term = 60 - (15 x 3) = 15 (1)

Sequence 15, 18, 21 ... (1)

Chapter Name:Samanthara Srenikal *Marks :(4)*

Quest:

a) Write the half of natural numbers as a sequence

b) Write the integers in that sequence in order.

c) What will be the position of the number 23 in the first sequence ?

d) Find the sum of the first fifty terms of the first sequence.

Hint:

a) $\frac{1}{2}$, $\frac{2}{2}$, $\frac{3}{2}$, $\frac{4}{2}$, ... (1)

b) 1, 2, 3, ... (1)

c) 46 (1)

d) $\frac{50\,x\,51}{4}$ =637.5 (1)

Chapter Name:Samanthara Srenikal *Marks :(4)*

Quest:

The algebraic expression of an arithmetic sequence is 8n+11

a) Write the common difference of the sequence

b)What is the remainder got when each term of this sequence is divided by the common difference?

c) Is 11 a term of this sequence? Why?

Hint:

a)Common difference=8 1

b) 3 1

c) No . First trerm is 19 and common difference is 8 2

Chapter Name:Samanthara Srenikal *Marks :(2)*

Quest:

In the Arithmetic sequence $\frac{1}{2}$, $\frac{4}{3}$, $\frac{13}{6}$, ...

a) What is the common difference?

b) Which is the first integer term in the sequence?

Hint:

a) $\frac{5}{6}$ 1

b) $\frac{18}{6}$ =3 1

Chapter Name:Samanthara Srenikal *Marks :(3)*

Quest:

The algebraic expression of an arithmetic sequence is 6n+1

a) Write the sequence?

b) What is the remainder when the terms are divided by 6?

c) Write the algebraic expression of the sequence obtained by the natural numbers which leaves a remainder 2 on division by 6?

Hint:

a) 7,13,19,... 1

b) 1 1

c) 6n-4 1

Chapter Name:Samanthara Srenikal *Marks :(3)*

Quest:

The sum of first 15 terms of an arithmetic sequence is 300.

a) What is its 8th term?

b)If the first term is 6 find its common difference?

c) Write the algebraic expression of this sequence?

Hint:
a) 20 1

b) 2 1

c) 2n+4 1

Chapter Name:Samanthara Srenikal *Marks :(3)*

Quest:
The algebraic expression of an arithmetic sequence is 5n-3.

a) What is its 20^{th} term?

b)Find the sum of first 39 terms ?

Hint:
a) 20^{th} term=100 – 3= 97 1

b) Sum of 39 terms =39 x 20th term =39 x97=3783 2

Chapter Name:Samanthara Srenikal *Marks :(2)*

Quest:
The sum of first 5 terms of an arithmetic sequence is 60. Write the sequence?

Hint:
Mid term =12 1

For writing the sequence 1

Chapter Name:Samanthara Srenikal *Marks :(3)*

Quest:
a) Write the arithmetic sequence with first term 1 and common difference ½?

b)Find its 31st term?

c) Calculate the sum of its first 31 terms?

Hint:
a) 1, 1½, 2 , 2 ½,... 1

b) 16 1

c) $\frac{31}{2}$ x17=263.5 1

Chapter Name:Samanthara Srenikal *Marks :(3)*

Quest:
The 10th term of an Arithmetic sequence is 20 and 20th term is 10

a) What is its common difference?

b) Find its 30th term?

Hint:
a) 10 common difference= - 10 1

common difference= -1 1

b) 30th term=0 1

Chapter Name:Samanthara Srenikal *Marks :(4)*

Quest:
a. What is the common difference of the arithmetic sequence 20,16,12,..?

b. How many positive numbers are there in this sequence?

c.Which is the first negative number in this sequence?

d. In which position did the first negative number occur in this sequence?

Hint:
a.common difference = -4 1

b.Number of positive terms = 5 1

c.First negative number -4 1

d 7th term 1

Chapter Name:Samanthara Srenikal *Marks :(3)*

Quest:
a)What is the common difference of the arithmetic sequence -100,-96,-92,...?

b)Check whether Zero is a term in this sequence.

c) Which is the first positive number in this sequence?

Hint:
a) Common difference = 4 1

b) Zero is a term. 1

c) First positive term = 4 1

Chapter Name:Samanthara Srenikal *Marks :(3)*

Quest:

a) Write the arithmetic sequence with first term 10 and common difference 4?

b)Write the difference of the terms in the same position of the above sequence and the arithmetic sequence 11,17,23,....?

c) Find the sum of first 20 terms of the sequence thus obtained?

Hint:

a) 10,14,18,.... 1

b)1,3,5,7,..... 1

c)20^2= 400 1

Chapter Name:Samanthara Srenikal *Marks :(2)*

Quest:

a) Write the sequence of perfect squares which are even.

b) Is it an arithmetic sequence?

Hint:

a)4,16,36,64,... 1

b)This is not an arithmetic sequence. 1

Chapter Name:Samanthara Srenikal *Marks :(4)*

Quest:

The sum of first 9 terms of an arithmetic sequence is 360.

a)What is its 5th term?

b) If the sum of first 5 terms is 100 ,What is its third term?

c)What is the common difference of this sequence?

d)Write the sequence .

Hint:

a) 5th term= $\frac{360}{9} = 40$ 1

b)Third term = $\frac{100}{5} = 20$ 1

c)common difference = 10 1

d)0,10,20,... 1

Chapter Name:Samanthara Srenikal *Marks :(4)*

Quest:

The sum of first 30 natural numbers is $\frac{30 x 31}{2}$.

a) Find the sum of first 30 multiples of 6?

b)Write the algebraic form of the sequence obtained by subtracting 2 from the multiples of 6?

c)Find the sum of first 30 terms of this sequence?

Hint:

a) $\frac{30 x 31}{2}$ x 6 1

= 2790 1

b) 6n-2 1

c)2790-60=2730 1

Chapter Name:Samanthara Srenikal *Marks :(2)*

Quest:

The algebraic expression of an arithmetic sequence is 8n+5.

a)What is the common difference of this sequence?

b) What is the difference between the smallest four digit number and largest three digit number in this sequence

Hint:

a) 8 1

b) 8 1

Chapter Name:Samanthara Srenikal *Marks :(4)*

Quest:

Consider the arithmetic sequence 4,6,8 ...

a) What is the 5th term in the sequence?

b)Write the ratio between the first and third terms of this sequence?

c)Write the ratio between the second and fifth terms of this sequence?

d)Which term satisfies the same ratio with the 10th term?

Hint:

a) 12 1

b) 1:2 1

c) 1:2 1

d) 21st term 1

Chapter Name:Samanthara Srenikal *Marks :(5)*

Quest:

a) Which is the first number above 200 which leaves a remainder 3 on division by 7?

b)How many such numbers are there between 200 and 400?

c) Find the sum of these numbers?

Hint:

a) For finding first number= 206
1

For finding last number = 395
1

c) For finding the sequence 206,213, 220 ...395 and common difference = 7
1

b)Numbber of terms = 28
1

c)For finding the sum as 8414
1

Chapter Name:Samanthara Srenikal *Marks :(5)*

Quest:

a) Write the first three digit number which is a multiple of 9.

b) Write the sequence of all three digit numbers which are multiples of 9.

c) How many numbers are there in the above sequence ?

d) Find the sum of all these numbers.

Hint:

a) 108 (1)

b) 108, 117, 126 ..... (1)

c) $\frac{999-108}{9}$ + 1 = 100 (2)

d) $\frac{100(108+999)}{2}$ = 55350 (1)

Chapter Name:Samanthara Srenikal *Marks :(4)*

Quest:

4

8 12

16 20 24

28 32 36 40

... ...

... ...

a) Write the next two rows in this pattern .

b) Write the first and last terms of the 11 th row.

Hint:

a) 44 48 52 56 60

64 68 72 76 80 84 (1)

c) [$\frac{(10 x 11)}{2}$ + 1] x 4 = 56 x 4 = 224 (2)

$\frac{11 \times 12}{2} \times 4 = 66 \times 4 = 264$ (1)

Chapter Name:Samanthara Srenikal *Marks :(5)*

Quest:

2

4 6 8

10 12 14 16 18

. . . . . .

a)Write the next line in this pattern.

b)How many numbers are there in the 10th row?

c)What are the last and first terms in the tenth row ?

Hint:

a) 20,22,24,26,28,30, 32 1

b)20-1=19 1

c) Identifies the last terms as $2x1^2$, $2x2^2$, $2x3^2$,... 1

Last term in the 10th row $=2x10^2=200$ 1

First term in the 10th row = $2x\ 9^2 + 2=164$ 1

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Class Type:
SSE

Class:
X

Subject:
Mathematics

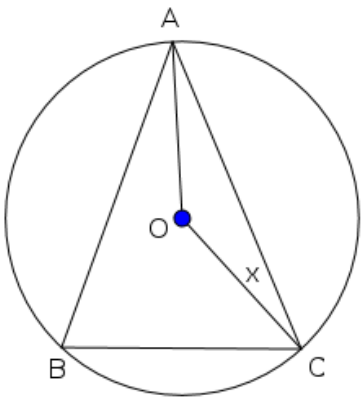
Language:
English

Chapter:
Vrithangal

Subtitle:
Select

Chapter Name:Vrithangal *Marks :(4)*

Quest:



A,B, C are points in the circle with centre O. If ∠OCA = x then

Find ∠OAC

Prove that ∠OCA + ∠ABC = 90° .

Hint:

∠OCA = x , ∠OAC = x - 1

∠AOC = 180 – 2x - 1

∠B = 90 – x - 1

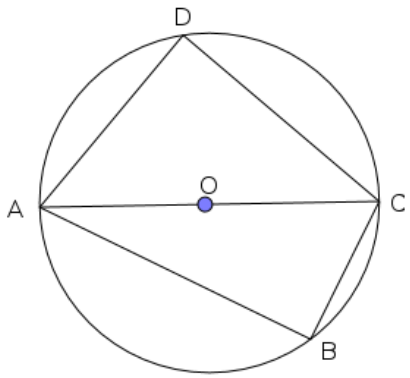
∠OCA + ∠ABC = 90 – x + x = 90^0 - 1

Chapter Name:Vrithangal *Marks :(2)*

Quest:

In the circle with centre O , ∠ CAD= 40° then

Find ∠B, and ∠ACD?



Hint:

∠B = ∠D= 90° - 1

∠ACD = 50° - 1

Chapter Name:Vrithangal *Marks :(4)*

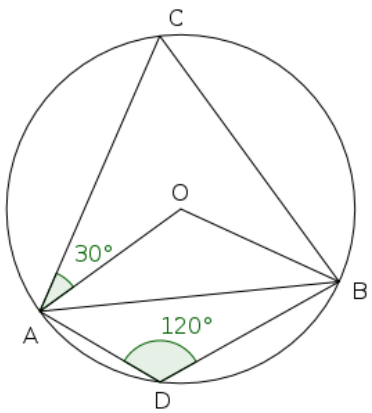
Quest:

In the figure O is the centre of the circle. And ∠ADB=120° ,∠OAC=30° , Then

Find ∠ACB

Find ∠OAB

Justify that ABC is an equilateral Triangle.



Hint:

∠C=180-120=60° - 1

∠AOB =120° ∠OAB =30° - 1

∠A=60° , ∠B =60° ABC is equilateral - 2

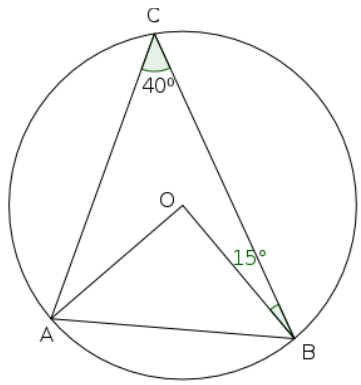
Chapter Name:Vrithangal *Marks :(4)*

Quest:
In the figure ∠C= 40°,∠OBC=15°

Find ∠AOB

Find ∠OAB

Find all angles of triangle ABC



Hint:
a) ∠AOB = 80^0 - 1

b) ∠OAB = $\frac{(180 - 80)}{2} = 50^0$ - 1

c) ∠B=65°, ∠A=75° - 2

Chapter Name:Vrithangal *Marks :(5)*

Quest:
Draw a rectangle of length 6cm and breadth 4cm

Construct a square having same area of the rectangle.

Hint:
For Drawing the rectangle - 1

For extending length by adding the breadth with length - 1

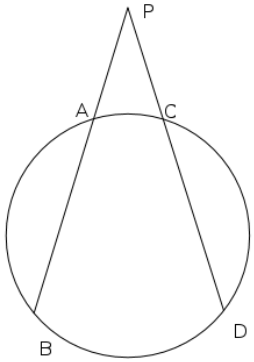
For drawing the perpendicular bisector of this line - 1

Drawing the Square - 2

Chapter Name:Vrithangal *Marks :(5)*

Quest:
In the figure PA=PC, Which are the triangles formed when AC and BD are joined ?

Prove that ABDC is an isosceles trapezium?



Hint:

a) ΔPAC, ΔPBD - 1

b) PB = PD (PA = PC , PA x PB = PC x PD) - 1

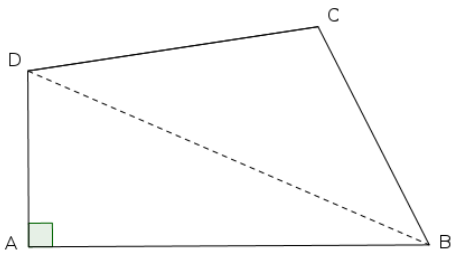
AB = CD - 1

(AC and BD are parallel (∠PAC = ∠ PBD) - 1

ABDC is an isosceles trapezium - 1

Chapter Name:Vrithangal *Marks :(2)*

Quest:



- In the figure if we draw a circle with diagonal BD of the quadrilateral ABCD as diameter , where will be the positions of the vertices A and C (∠ C = 100^0)?

Hint:

A is on the circle and C is in the circle -- 2

Chapter Name:Vrithangal *Marks :(4)*

Quest:
Draw a circle with radius 3 cm .Construct a triangle with vertices on the circle and having angles 50° , 60° , 70°

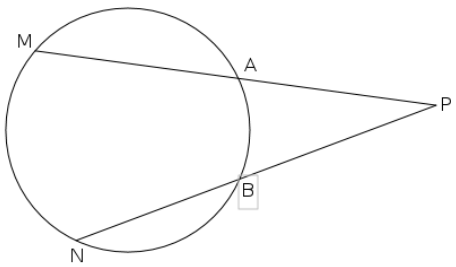
Hint:
For Drawing the circle - 1

For drawing angles 100° , 120° , 140° at the centre -2

For drawing the triangle - 1

Chapter Name:Vrithangal *Marks :(4)*

Quest:
In the figure the chords MA and NB extended and met at P. MA=5cm , PA=7cm and PB=6cm.Calculate the length of NB?



Hint:
MP=12 cm - 1

PA xPM= PB xPN - 1

PN=14cm - 1

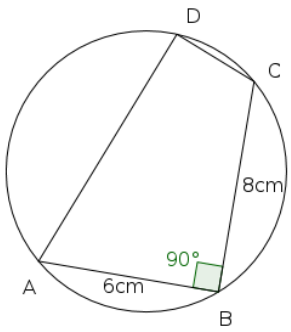
NB=8 cm - 1

Chapter Name:Vrithangal

Quest:
From the figure

a) What is the measure of ∠ADC ?

b) Find the radius of the circle.



Hint:
a) ∠ADC=90° - 1

b) diameter = 10 cm - 1

radius = 5cm - 1

Chapter Name:Vrithangal *Marks :(5)*

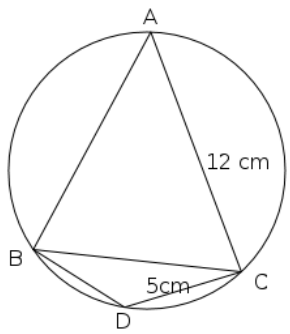
Quest:
In the figure ΔABC is equilateral. BD=CD, AC=12cm and CD=5cm.Then

Find the measure of ∠ACB

Find the measure of ∠D

Find the measure of ∠BCD

Calculate the diameter of the circle



Hint:
a) ∠ACB =60° - 1

b) ∠D =120° - 1 *Marks :(3)*

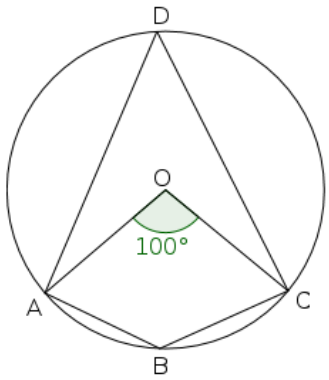
c) ∠BCD =30° - 1

d) ∠ACD=90 ° - 1

AD=13cm 1

Chapter Name:Vrithangal *Marks :(2)*

Quest:



In the figure O is the centre of the circle. If ∠AOC=100° find ∠ABC ?

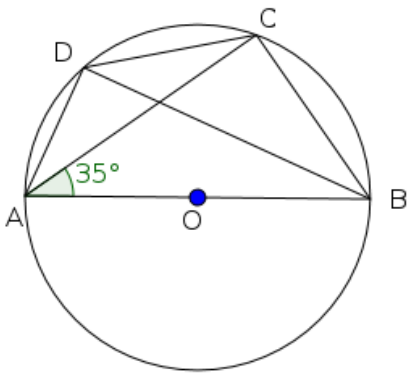
Hint:

∠ADC= $\frac{1}{2}$ x ∠AOC= $\frac{1}{2}$ x 100° = 50° 1

∠ABC =180° - 50° =130° 1

Chapter Name:Vrithangal *Marks :(2)*

Quest:



In the figure ∠BAC = 35° find the measures of ∠BDC and ∠ADC?

Hint:

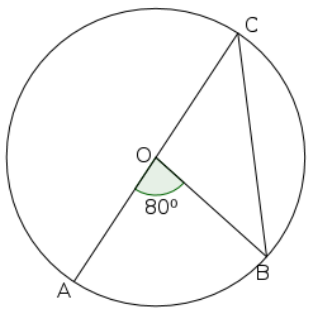
∠BDC = 35° - 1

∠ADC = ∠ADB + ∠BDC = 90 + 35 = 125° - 1

Chapter Name:Vrithangal *Marks :(2)*

Quest:

In the figure O is the centre of the circle. If ∠ AOB = 80° Find the measures of ∠ OCB and ∠ OBC



Hint:

∠ OCB= $\frac{1}{2}$ X ∠ AOB = $\frac{1}{2}$ X 80° = 40 ° - 1

ΔOBC is isosceles, so ∠ OBC= 40° - 1

Chapter Name:Vrithangal *Marks :(5)*

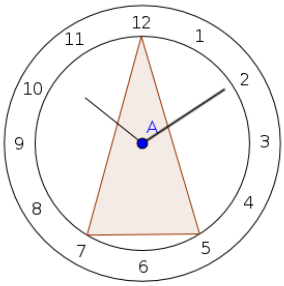
Quest:

- In the figure of a clock , numbers 12 , 7 , and 5 are joined to form a triangle.

  (a) What are the measure of the angles of this triangle ?

  (b) Give a suitable name for this triangle.

  (c) Howmany such triangles can be drawn in this clock ?

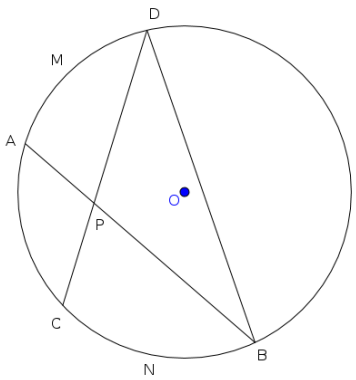


Hint:

- Angles are 75° , 75° , 30° -- 2
- Isosceles triangle -- 1
- 12 -- 2

Chapter Name:Vrithangal *Marks :(5)*

Quest:



- In the figure the length of the arc CNB is $\frac{1}{5}$ of the perimetre of the circle and the length of the arc AMD is $\frac{1}{6}$ of the perimetre of the circle.

  (a) What is the measure of centre angle of the arc CNB ?

  (b) Find the measure of ∠ CDB ?

  (c) Find the measurement of ∠ ABD.

  (d) Write the measurement of ∠ APD.

Hint:

- Centre angle of arc CNB = 72° -- 1

- ∠ CDB = 36° -- 1
- ∠ ABD = 30° -- 1
- ∠ APD = 66° - 2

Chapter Name:Vrithangal *Marks :(4)*

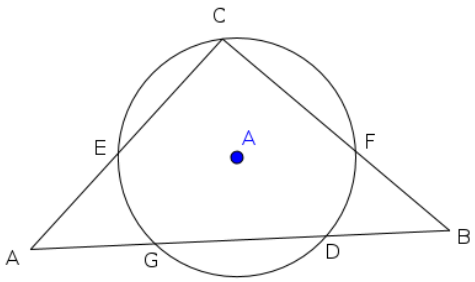
Quest:

- In the figure chords CE , GD , CF are extended to meet outside the circle at A and B. The lengths AG and BD are equal.

  If AE x AC = AG x AD

  (a) Write the product equal to BF x BC?

  (b) Prove that AE x AC = BF x BC



Hint:

- BD x BG -- 1
- AG x AD = BD x BG -- 1
- BF x BC = AG x AD -- 1
- BF x BC = AE x AC -- 1

Chapter Name:Vrithangal *Marks :(3)*

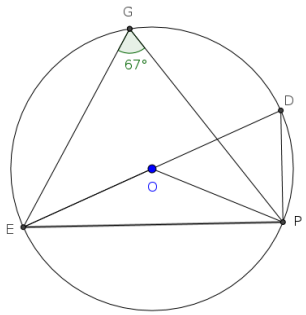
Quest:

- In the figure O is the centre of the circle and ED is its diametre.

  If ∠EGP = 67°

  (a) What is the measure of ∠ EDP.

  (b) Find other two angles of Δ ODP ?

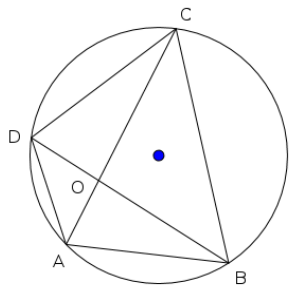


Hint:

- a) ∠ EDP= 67° -- 1
- b) ∠ DOP = 46° , ∠ OPD = 67° -- 2

Chapter Name:Vrithangal *Marks :(3)*

Quest:



Based on the figure find the angles from Part 2 which is equal to the angles in Part 1

Part 1	Part 2
∠ACB	∠BDC
∠ABD	∠AOD
∠BAC	∠ADB
	∠ACD

Hint:

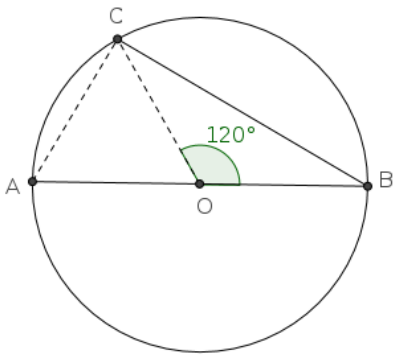
∠ACB = ∠ADB - 1

∠ABD = ∠ACD - 1

∠BAC = ∠BDC - 1

Chapter Name:Vrithangal *Marks :(2)*

Quest:
In the figure O is the centre of the circle and AB is the diametre. If ∠BOC = 120° , Find ∠ OCA and ∠ OAC ?



Hint:
∠ OCA = ∠ OAC = 60° - 2

Chapter Name:Vrithangal *Marks :(2)*

Quest:
In the figure O is the centre of the circle. ΔABC is equilateral

Find the measures of

a) ∠A

b) ∠BOC

Hint:
a) ∠A= 60° -1

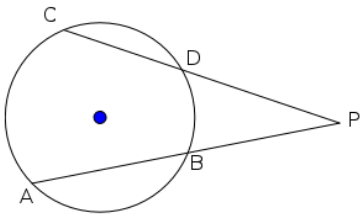
b) ∠BOC = 120° -1

Chapter Name:Vrithangal *Marks :(5)*

Quest:
In the figure PC=10 cm,CD=4cm, and PB:PA=2:3. Then

a) Find the length of PD

b) Find the length of AB



Hint:

a) PD = 6cm 1

b) PA x PB = PC x PD, 1

PB : PA= 2 : 3, PB = 2x, PA = 3x 1

$3x \times 2x = 10 \times 6$,

$x^2 = \frac{60}{6} = 10$

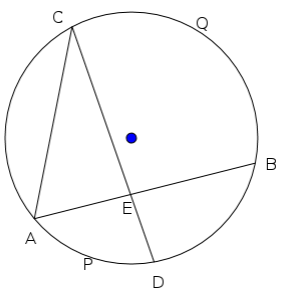
$x = \sqrt{10}$ 1

AB = PA- PB = 3x – 2x = x = $\sqrt{10}$ 1

Chapter Name:Vrithangal *Marks :(3)*

Quest:

In the circle the chords AB and CD intersect at E. The central angle of arc BQC is 130°. The central angle of arc APD is 40° . Find



a) ∠ACE

b) ∠CAE

c) ∠BEC

Hint:

a) ∠ACE = 20° -1

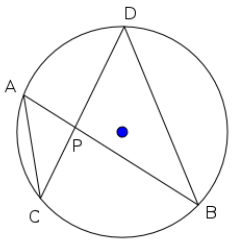
b) ∠CAE = 65° - 1

c) ∠BEC= 85° - 1

Chapter Name:Vrithangal

Quest:

Based on the figure write the angles from Δ BPD equal to the following angles in Δ APC



a) ∠ACP

b) ∠CAP

Hint:

a) ∠ACP = ∠PBD - 1

b) ∠CAP = ∠ PDB - 1

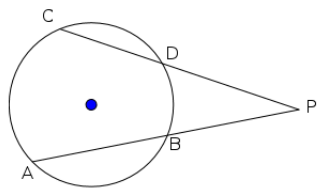
Chapter Name:Vrithangal *Marks :(4)*

Quest:

In the figure PA=9cm, PB=4cm, and PC is 9cm more than PD

(a) If PD = x find the length of PC ?

(b) Find the length of PD ?



Hint:

(a) PD=x , PC= x+9 1

(b) PA x PB = PC x PD

9 x 4 = (x + 9)x 1

$x^2 + 9x = 36$, x= 3 1

PC = 12

PD =3 1

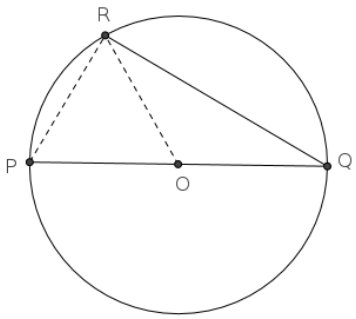
Chapter Name:Vrithangal *Marks :(3)*

Quest:

- In the figure O is the centre of the circle and PQ is its diametre.

  If PR = OR

  (a) Prove that Δ OPR is an equilateral triangle.



(b) Find all the angles of Δ OQR. *Marks :(2)*

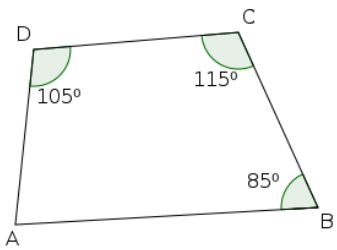
Hint:

- For finding the angles of ΔOPR are 60° -- 1
- For finding the angles of Δ OQR -- 2

Chapter Name:Vrithangal *Marks :(3)*

Quest:

In the figure ABCD is a quadrilateral .If a circle is drawn through A,B,and D state the position of the point C as Outside the circle,Inside the circle,or On the circle? Justify your answer.



Hint:

∠A=55° - 1

∠A + ∠C < 180 - 1

C is outside the circle - 1

Chapter Name:Vrithangal *Marks :(3)*

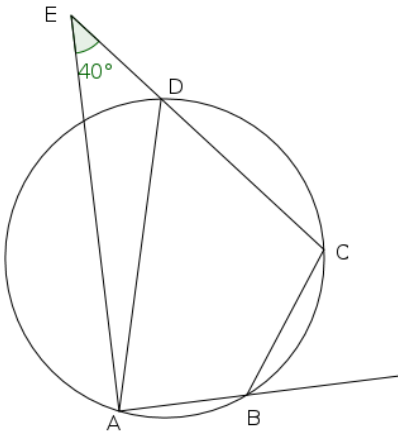
Quest:

In the figure ∠ AED=40° then

Which of the following can be the measure of ∠ABC?

(140°, 130° , 150°, 180°)

Using the above measure of ∠ABC , find the measures of angels of ΔEAD



Hint:

∠ ABC=130° (∠ABC + ∠E < 180) - 1

∠ EDA=130° ,<EAD =10° - 2

Chapter Name:Vrithangal *Marks :(5)*

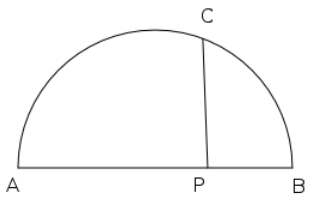
Quest:

In the figure AB is the diameter of the semicircle. IF AB = 9 cm, PB = 3 cm then

a) find PA ?

b) find PC^2 ?

c) Draw a square of area $18cm^2$?



Hint:

a) PA = 6 cm - 1

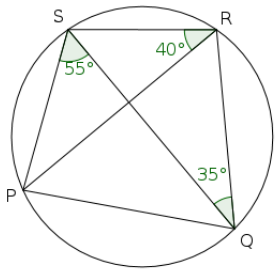
b) $PC^2 = PA \times PB = 6 \times 3 = 18$ - 1

c) For Drawing the square by copying the figure - 3

Chapter Name:Vrithangal *Marks :(4)*

Quest:

In the figure P,Q,R,S are points on a circle. Find all angles of quadrilateral PQRS?



Hint:

∠PSR = 105° 1

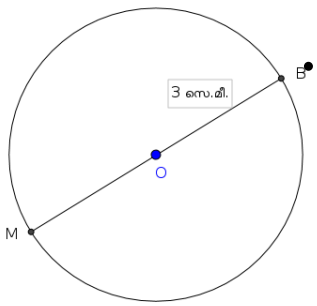
∠ SPQ =85° - 1

∠PQR=75° - 1

∠QRS=95° - 1

Chapter Name:Vrithangal *Marks :(5)*

Quest:



Draw the figure in your paper.

(a) Mark a point C on the circle with ∠ MBC = 30°

(b) Join M , B , C to get a triangle .

(c) Find other two angles of the triangle MBC

(d) Write the ratio of the smallest side to the radius of this triangle.

Hint:

(a) For Drawing ∠ MBC = 30° -- 1

- (b) Joining the points M , B , C and making triangle -- 1
- (c) For finding other angles of Δ MBC -- 2
- (d) For finding the ratio as 1 : 1 -- 1

Chapter Name:Vrithangal *Marks :(5)*

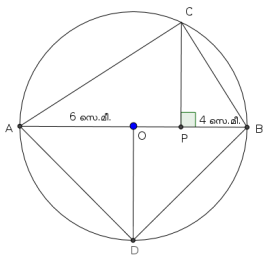
Quest:

- In the figure O is the centre and AB is the diametre of the circle. PC is perpendicular to AB. If $PA \times PB = PC^2$
- (a) What is the length of OP ?

  (b) Find the length of PC .

  (c) Write the ratio of the areas of Δ PBC and Δ APC ?

  (d) Find the area of quadrilateral ACBD.



Hint:

- (a) OP = 2cm. . -- 1
- (b) PC = √32 -- 1
- (c) For finding the ratio as 1 : 2 -- 1
- (d) 36 + 6 √32 -- 2

Chapter Name:Vrithangal *Marks :(5)*

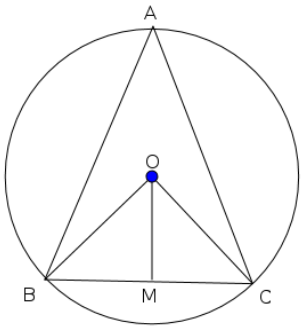
Quest:

A, B, and C are points on the circle with centre O . If ∠A = 60° , BC = 4cm then

Find ∠BOC

(1) Find the circumradius

(2) When ∠A = 30°, Prove that BC is equal to circumradius.



Hint:

(a) ∠BOC = 120° - 1

(b) ∠CBO = 30° (30, 60, 90) (1: $\sqrt{3}$: 2) - 1

OB = $2\times\frac{2}{\sqrt{3}} = \frac{4}{\sqrt{3}}$ - 1

(c) When ∠A= 30° Triangle OBC becomes equilateral - 1

OB=BC - 1

Chapter Name:Vrithangal *Marks :(5)*

Quest:

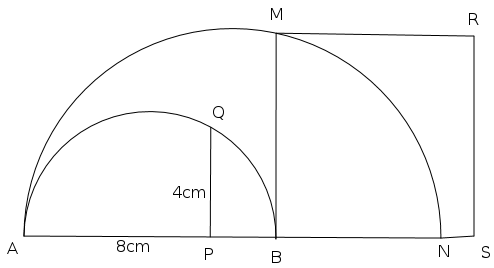
In the figure the diameter of the larger semi circle is 13 cm AP=8cm, PQ = 4 cm.

(a) Then PA x PB =.....

(b) PB = ...

(c) Find the radius of the smaller semicircle?

(d) What is the area of the square BMRS?



Hint:

(a0 PA xPB=PQ² = 16 - 1

(b) PB=2 - 1

(c) Radius of the small semicircle =5 cm - 1

BM²=10 x3 - 1

(d) Area of the square BMRS = 30 - 1

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Class Type:
SSE

Class:
X

Subject:
Mathematics

Language:
English

Chapter:
Sadhyathakalude Ganitham

Subtitle:
Select

Chapter Name:Sadhyathakalude Ganitham *Marks :(3)*

Quest:
In class 10A there are 20 boys and 15 girls .In 10B there are 15 boys and 25 girls. One student from each class is to be selected for a competition. What is the probability of

a) both are boys?

b) at least one girl?

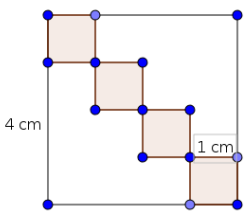
Hint:
Total No. of pairs = 35 X 40 - 1

Probability of both are boys = $\frac{20}{35} \times \frac{15}{40} = \frac{3}{14}$ - 1

Probability of at least one girl = $\frac{11}{14}$ - 1

Chapter Name:Sadhyathakalude Ganitham *Marks :(2)*

Quest:
Without looking if we put a dot in the figure, what is the probability that the dot being in the shaded portion ?



Hint:
For identifying 16 small squares in the figure 1

Probability = $\frac{4}{16} = \frac{1}{4}$ 1

Chapter Name:Sadhyathakalude Ganitham *Marks :(3)*

Quest:
Ask somebody to say a two digit number.

a) What is the probability of being the number 10?

b) What is the probability that the number being a perfect square?

Hint:
a) Total number of two digit numbers = 90

P(the number being 10) = $\frac{1}{90}$ (1)

b) No. of two digit squares = 16, 25, 36, 49, 64, 81 (1)

P(the number being a two digit square)= $\frac{6}{90}=\frac{1}{15}$ (1)

Chapter Name:Sadhyathakalude Ganitham *Marks :(3)*

Quest:
In a box there are 12 black beads and some white beads. One bead is selecting randomly. The probability of getting a white bead is 1/3 then

what is the probability of getting a black bead?

How many beads are there in the box?

Hint:
Probability of getting a black bead = $1-\frac{1}{3} = \frac{2}{3}$ (1)

$x\times\frac{2}{3}$ = 12 (1)

$x=\frac{12\times3}{2}$ = 18 (1)

Chapter Name:Sadhyathakalude Ganitham *Marks :(3)*

Quest:
In a bag there are 6 red balls and 4 white balls and in another box there are 5 red balls and 6 white balls.

a) What is the probability of taking a white ball from the first bag?

b) Which bag has more probability of getting a red ball?

Hint:

probability of taking a white ball from the first bag = $\frac{2}{5}$ 1

probability of taking a red ball from the first bag = $\frac{6}{10}$ 1

probability of taking a red ball from the second bag = $\frac{5}{11}$ 1

$\frac{6}{10} > \frac{5}{11}$

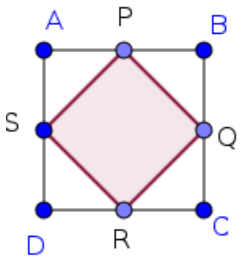
probability of taking a red ball from the first bag is greater - 1

Chapter Name:Sadhyathakalude Ganitham *Marks :(2)*

Quest:

In the figure , ABCD is a square and P,Q,R,and S are the midpoints of its sides.

Without looking into it, if we put a dot ,what is the chance that the dot is in the shaded portion?



Hint:

Area of the shaded portion = Half of the larger square

Probability = $\frac{Area\ of\ the\ smaller\ square}{Area\ of\ the\ larger\ square}$ 1

= $\frac{1}{2}$ 1

Chapter Name:Sadhyathakalude Ganitham *Marks :(3)*

Quest:
A box contains 12 white beads,10 red beads,and 8 blue beads. Without looking ,if one bead is taken , what is the chance of it

a) being a red bead?

b) being a blue or white bead?

Hint:
Probability= $\frac{Favourable\ outcomes}{Total\ outcomes}$
1

a) $\frac{10}{30}=\frac{1}{3}$ 1

b) $\frac{12+8}{30}=\frac{20}{30}=\frac{2}{3}$

Chapter Name:Sadhyathakalude Ganitham *Marks :(3)*

Quest:
In a box there are 20 red ink pens 50 blue ink pens and 30 black ink pens. One pen is taking at random from the box.

a) What is the probability of getting a black ink pen?

b) What is the probability of getting a black ink or blue ink pen?

c) What is the probability of not getting a red ink pen?

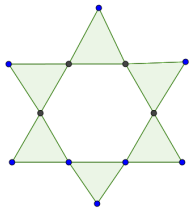
Hint:
a) $\frac{30}{100}=\frac{3}{10}$ (1)

b) $\frac{80}{100}=\frac{4}{5}$ (1)

c) $\frac{80}{100}=\frac{4}{5}$ (1)

Chapter Name:Sadhyathakalude Ganitham *Marks :(3)*

Quest:
Equilateral triangles are drawn on each side of a regular hexagon. if we put a dot in the figure what is the probability that the dot being in the shaded portion



Hint:
Total no. of equilateral triangles = 12 - 1

No. of shaded equilateral triangles = 6 - 1

Probability = $\frac{6}{12} = \frac{1}{2}$ - 1

Chapter Name:Sadhyathakalude Ganitham *Marks :(3)*

Quest:
Numbers from 1 to 10 are written in paper slips and put in to a bag and numbers 5,10,15,in another bag. If one number is taken from each bag without looking into it

a) write the pairs in which both are even numbers?

b)write the probability of getting at least one odd number?

Hint:
(2,10) (4,10) (6,10) (8,10) (10,10) 1

at least one odd =30 – 5 = 25 1

probability = $\frac{25}{30} = \frac{5}{6}$ 1

Chapter Name:Sadhyathakalude Ganitham *Marks :(3)*

Quest:
A box contains slips numbered 1,2,3,4. Another box contains slips numbered 1,2,3. If one slip is taken from each,

a) Which will be the smallest sum of the numbers ?

b) What is the probability of getting the sum 6 ?

Hint:
Least sum = 2 (1)

No of pairs whose sum is 6 are

(3, 3), (4, 2) (1)

probability of getting the sum 6 = $\frac{2}{12}=\frac{1}{6}$ (1)

Chapter Name:Sadhyathakalude Ganitham *Marks :(3)*

Quest:
There are 25 ripe and 15 raw mangoes in a box. Raju randomly selected a mango. After that Fazil is selecting a mango from the box.

a) What is the probability to select a ripe mango by Raju ?

b) What is the probability to select a ripe mango by Fazil ?

Hint:
a) P(the mango taken by Raju is ripen) = $\frac{25}{40}=\frac{5}{8}$ (1)

If the mango taken by Raju is ripen , then

b) P(the mangotaken by Fazil is ripen) = $\frac{24}{39}$ (1)

If the mango taken by Raju is not ripen , then

P(the mangotaken by fazil is not ripen) = $\frac{25}{39}$ (1)

Chapter Name:Sadhyathakalude Ganitham *Marks :(3)*

Quest:
There are 36 beads in a box, some are white and some are black. The probability of drawing a white bead is $\frac{1}{4}$

a) What is the probability of drawing a black bead?

b) How many black beads are there in the box?

Hint:
a) P(getting a black bead) $1-\frac{1}{4}=\frac{3}{4}$ (1)

b) No of black bead = $36\times\frac{3}{4}$ = 27 (2)

Chapter Name:Sadhyathakalude Ganitham *Marks :(3)*

Quest:
Each of the 11 letters of the word MATHEMATICS is written on separate cards and put into a box. If we take one card randomly from it,

a) What is the probability of getting the letter 'M'?

b) What is the probability of getting a vowel?

Hint:
a) P (getting the letter M) = $\frac{2}{11}$ (1)

b)Vowels are A, E, A, I (1)

P(getting a vowel) = $\frac{4}{11}$ (1)

Chapter Name:Sadhyathakalude Ganitham *Marks :(2)*

Quest:
In a box there are 20 ripen mangoes and some raw mangoes ,without looking into it if we take a mango from the box the probability of getting a raw mango is twice the probability of getting a ripen mango. How many raw mangoes are there in the box?

Hint:
Probability of getting raw mango is twice the probability of getting ripen mango

So no. of raw mango = 2 X no. of ripen mangoes 1

= 2 x 20 = 40 1

Chapter Name:Sadhyathakalude Ganitham *Marks :(3)*

Quest:
There are 21 blue buttons and 29 white buttons in a bag. Without looking into the bag, a button is taking randomly

a) write the probability for getting a blue button.

b)write the probability for getting a white button.

c) which button has more chance?

Hint:

probability for getting a blue button = $\frac{21}{50}$ 1

probability for getting a white button = $\frac{29}{50}$ 1

probability for getting a white button is more 1

Chapter Name:Sadhyathakalude Ganitham *Marks :(2)*

Quest:
What is the probability that 5 Saturdays in the month of February may occur in a leap year ?

Hint:
The month of February having 28 days contains 4 saturdays

29th day of February can be one of the 7 days 1

P(it being saturday) = $\frac{1}{7}$ 1

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Class Type:
SSE
Class:
X
Subject:
Mathematics
Language:
English
Chapter:
Randamkrithi Samavakyangal
Subtitle:
Select

Chapter Name:Randamkrithi Samavakyangal *Marks :(3)*

Quest:
Length of a rectangle is 10 cm more than the breadth. If the area is 144 square cm, find the length and breadth of the rectangle.

Hint:
breadth = x

length = x + 10 (1)

x (x + 10) = 144

x^2 + 10 x = 144 (1)

breadth = 8 ,length = 18 (1)

Chapter Name:Randamkrithi Samavakyangal *Marks :(3)*

Quest:
Difference between two numbers is 4 and its product is 96. Find the numbers.

Hint:
.

Numbers x, x +4 (1)

x (x + 4) = 96

x^2 + 4x =96 (1)

x = 8, -12

numbers = 8, 12 or -12, -8 (1)

Chapter Name:Randamkrithi Samavakyangal *Marks :(3)*

Quest:
If the sum of the square of Anju's age and 6 times of Anju's age is 280, then find Anju's age.

Hint:
.Age = x

$x^2 + 6x = 280$ (1)

$(x + 3)^2 = 289$ (1)

x + 3 = 17

x = 14 (1)

Chapter Name:Randamkrithi Samavakyangal *Marks :(5)*

Quest:
All the terms of an arithmetic sequence are natural numbers. Its common difference is 3, then

a) If one term is x, which is the next term?

b) If the sum of the reciprocals of two consecutive terms of the arithmetic sequence is $\frac{11}{28}$, find the terms.

Hint:
.

Next term = x + 3 (1)

$\frac{1}{x}+\frac{1}{x+3} = \frac{11}{28}$ (1)

$11x^2 - 23x - 84 = 0$ (1)

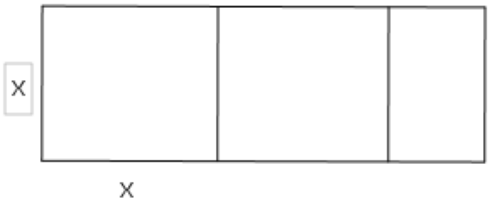
x = 4, $\frac{21}{11}$ (1)

പദങ്ങൾ 4, 7 (1)

Chapter Name:Randamkrithi Samavakyangal *Marks :(4)*

Quest:

The length of a rectangular sheet shown in the figure is 13 cm.



From this sheet two square sheets of maximum size are cut off.

The area of the remaining sheet is 15 sq.cm.

(a) if the width of the sheet is x , what is its breadth of the remaining sheet ?

(b) Forming a second degree equation, find the length and breadth of the remaining sheet.

Hint:

(a) Breadth of remaining rectangle = 13-2x

(b) x(13-2x)=15

$2x^2$-13x+15=0

x= $\frac{13 \mp \sqrt{169-4\times2\times15}}{2\times2}$

x = 5 , 1.5

If x = 5 breadth = 3 cm

If x = 1.5,breadth = 10 cm

Chapter Name:Randamkrithi Samavakyangal *Marks :(4)*

Quest:

A pond of rectangular shape is to be constructed with perimeter 42 m and diagonal length 15 m.

If breadth of the pond is '*x*', what is its length?

Form a second degree equation and hence find the length and breadth of the pond.

Hint:

breadth = x, lengthg = 21-x (1)

$x^2 + (21 - x)^2$ = 225 (1)

x^2-21x + 108 = 0 (1)

x = 9, 12

breadth = 9m , lengthg = 12m (1)

Chapter Name:Randamkrithi Samavakyangal *Marks :(3)*

Quest:
When 4 cm is subtracted from each side of a square, area becomes 144 square cm. Form an equation by taking *x* as the side of larger squire. Find the side of the large square?

Hint:
Length of a side of the large square =x , then the length of a side of the small square=x-4
(1)

$(x - 4)2 = 144$ (1)

$x = 16$ (1)

Chapter Name:Randamkrithi Samavakyangal *Marks :(4)*

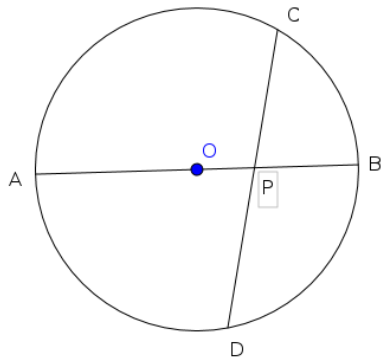
Quest:

In the figure AB is the diametre of the circle. The chord CD cut AB at P.

AB = 16 cm , CD = 14 cm , PC = 6 cm

(a) If PA = x , Find PB .

(b) Find the length of PA.



Hint:
(a) PB = 16 – x

(b) x(16 - x) = 6 x 8

$(x - 8)^2 = 16$

x = 12

Chapter Name:Randamkrithi Samavakyangal *Marks :(5)*

Quest:
When breadth is increased by 2 cm and length is reduced by 3 cm of a rectangle with perimeter 60 cm, the area of the newly formed rectangle became 210 sq.cm.

(a) if width of the first rectangle is x , what is its length ?

(b) What is the length of the newly formed rectangle ?

(c) Forming a second degree equation, find the length and breadth of the first rectangle.

Hint:
(a) Lenth of first rectangle = 30 – x

(b) Lenth of new rectangle = 27 – x

(c) (x + 2) (27 – x) = 210

x^2- 25x+156 = 0

x = 13,12

when x = 13 length = 17 cm

when x = 12 length = 18 cm

Chapter Name:Randamkrithi Samavakyangal *Marks :(3)*

Quest:

Sum of the first *n* consecutive natural numbers is $\frac{n(n+1)}{2}$. Then, how many natural numbers are to be added to get a sum 325 ?

Hint:

. $\frac{n(n+1)}{2}$ = 325 (1)

n^2 + n = 650 (1)

n = 25 (1)

Chapter Name:Randamkrithi Samavakyangal *Marks :(4)*

Quest:

Sum of the squares of two consecutive even numbers is 452.

a) If one number is 'x' , then what is the next number ?

b) Form the second degree equation and find the numbers

Hint:

(a) Next number is x + 2 (1)

(b) $x^2 + (x + 2)^2$ = 452 (1)

$(x + 1)^2$ = 225 (1)

The numbers are 14, 16 (1)

Chapter Name:Randamkrithi Samavakyangal *Marks :(5)*

Quest:

Number in the unit place of a two digit number is 3 more than that in the tenth place number. Product of the number and the sum of its digits is 70. What is the number?

Hint:

.

അക്കങ്ങൾ = x, x+3

രണ്ടക്കസംഖ്യ = 11x + 3 (1)

(2x + 3)(11x + 3) = 70 (1)

$22x^2$ + 39x – 61 = 0 (1)

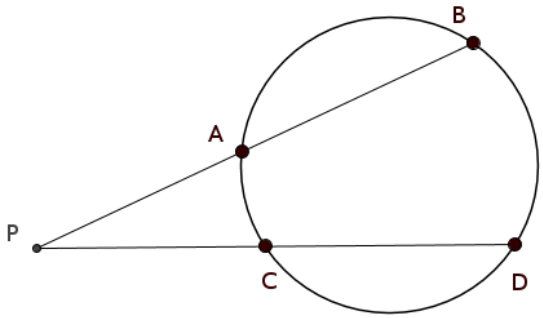
x = 1 (1)

സംഖ്യ = 14 (1)

Chapter Name:Randamkrithi Samavakyangal *Marks :(4)*

Quest:

In the figure, the chord AB and CD are extended and met at P. If PB = 14 cm, AB = 5 cm, CD = 15 cm, what is the length of PC?



Hint:

If PC = x,then PD = x + 15 (1)

x (x + 15) = 9 x 14 (1)

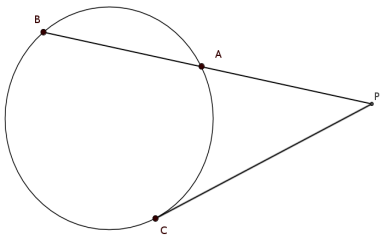
x^2 + 15x = 126 (1)

x = 6 (1)

Chapter Name:Randamkrithi Samavakyangal *Marks :(4)*

Quest:

In the figure, AB = 9 cm, PC= 6 cm, then what is the length of PA?



Hint:

x (x + 9) = 36 (1)

$x^2 + 9x + \left(\frac{9}{2}\right)^2 = 36 + \left(\frac{9}{2}\right)^2$ (1)

$\left(x+\frac{9}{2}\right)^2 = \frac{225}{4}$ (1)

PA = 3 cm (1)

സമഗ്ര ചോദ്യോത്തരങ്ങൾ

Class Type:
SSE

Class:
X

Subject:
Mathematics

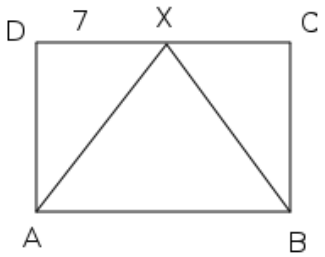
Language:
English

Chapter:
Thrikonamithi

Subtitle:
Select

Chapter Name:Thrikonamithi *Marks :(5)*

Quest:
In the figure X is the mid point of DC.. ΔAXB is an equilateral triangle and ABCD is a rectangle also DX = 7 cm



a) What is the measure of∠ AXB?

b) What is the measure of∠ DAX ?

c) Calculate the area of the rectangle.

Hint:
a) ∠ AXB = 60^0 (1)

b) ∠ DAX = 30^0 (1)

c) For identifying DX : AD : AX = 1 : $\sqrt{3}$: 2 (1)

AD = 7√3 ,AX = 14 (1)

Area of the rectangle =14 x 7√3 (1)

Chapter Name:Thrikonamithi *Marks :(3)*

Quest:
In the figure the radius of the circle is 6cm,AB=AC and ∠ B=70°.

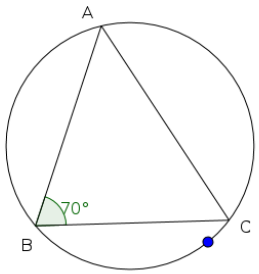
Find

a) ∠ A

b) The length of BC ?

Angle	sin	cos	tan

40°	.6428	.7660	.8391
70°	.9397	.3420	2.7475



Hint:

a) ∠ A=40° (1)

b) 2rsinA=BC (1)

12 sin40°= BC (1)

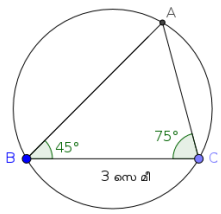
Chapter Name:Thrikonamithi *Marks :(3)*

Quest:

In ΔABC , BC= 3cm, ∠ B=45°, ∠ C=75°

a) Find ∠ A?

b) Find the circum radius ?



Hint:

a) ∠ A = 60^0 (1)

b) $\frac{3}{\sin 60}$ = 2r (1)

2r = 3 x $\frac{2}{\sqrt{3}}$ = 2 $\sqrt{3}$

r = $\sqrt{3}$ (1)

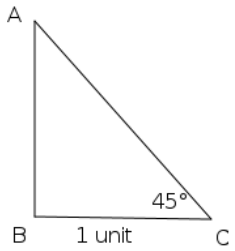
Chapter Name:Thrikonamithi *Marks :(3)*

Quest:

One of the angles of the right angled triangle ABC is 45° .The length of one of the perpendicular sides is 1 unit.

a) Find the value of sin45°

b) Prove that tan 45° = $\frac{\sin 45^\circ}{\cos 45^\circ}$



Hint:

a) sin 45°=$\frac{1}{\sqrt{2}}$ (1)

b) tan 45°=$\frac{1}{1}$ =1 (1)

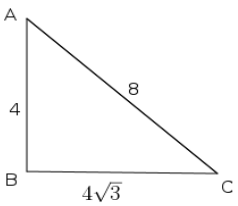
$\frac{\sin 45°}{\cos 45°} = \frac{(\frac{1}{\sqrt{2}})}{(\frac{1}{\sqrt{2}})}$ = 1 (1)

Chapter Name:Thrikonamithi *Marks :(3)*

Quest:

a) write the ratio of the sides of the triangle in the figure.

b) Which is the smallest angle in this triangle.? What is its measure?



Hint:

4 : 4√3 : 8 =1: √3 : 2 (1)

∠ C, ∠ C=30° (1+1)

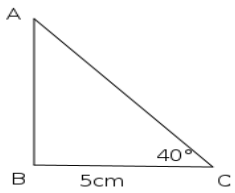
Chapter Name:Thrikonamithi *Marks :(2)*

Quest:

In Δ ABC , BC=5 cm and ∠ C=40°

Find the length of AB?

കോൺ	sin	cos	tan
40°	.6428	.7660	.8391
50°	.7660	.6428	1.1918



Hint:

Tan40°=$\frac{AB}{BC}$ (1)

AB=5tan 40° (1)

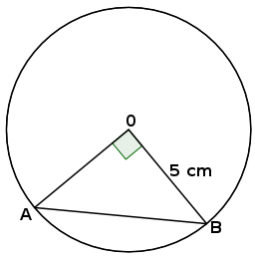
Chapter Name:Thrikonamithi *Marks :(3)*

Quest:

In the figure the radius of the circle is 5 cm . ∠ AOB= 90° . then

1. Find the length of AB.

2.Calculate the area of the triangle.



Hint:

1. AB= 5√2 cm (1)

2 .Area of the triangle = $\frac{1}{2}$ x 5x 5= 12.5 sq.cm (2)

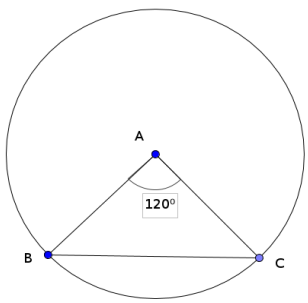
Chapter Name:Thrikonamithi *Marks :(3)*

Quest:

In the figure A is the centre of the circle and ∠A=120^0

a) Find AB : AC : BC

b) If AB = 8 cm what is length of BC ?



Hint:

a) For drawing perpendicular to the chord and forming two right triangles (1)

1 : 1 : $\sqrt{3}$ or 2 : 2 : 2 $\sqrt{3}$ (1)

b) BC = 8 $\sqrt{3}$ cm

(1)

Chapter Name:Thrikonamithi *Marks :(3)*

Quest:
In triangle ABC , ∠ B= 90^0, AC = 10 cm , BC = 6 cm . Find Sin A and Cos A.

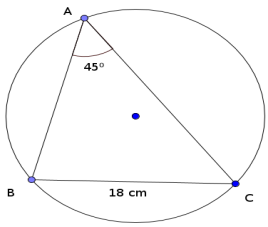
Hint:
AB = 8 cm (1)

Sin A = $\frac{6}{10}$ (1)

Cos A = $\frac{8}{10}$ (1)

Chapter Name:Thrikonamithi *Marks :(3)*

Quest:
Find the radius of the circle.



Hint:

$\frac{18}{\sin 45^\circ}$ = 2R (1)

$\frac{18}{(\frac{1}{\sqrt{2}})}$ = 2R

$18\sqrt{2}=2R$ (1)

$R=9\sqrt{2}$ (1)

Chapter Name:Thrikonamithi *Marks :(3)*

Quest:

The diagonal of a rectangle is 16 centimetres. This diagonal makes an angle 30° with one side of the rectangle.

a) Find the length and breadth of the rectangle?

b) What is the area of the rectangle ?

Hint:

a) 8 cm, $8\sqrt{3}$ cm (2)

b) $64\sqrt{3}$ sq.cm (1)

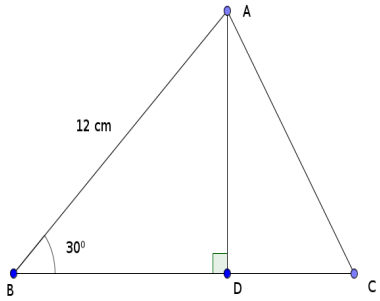
Chapter Name:Thrikonamithi *Marks :(3)*

Quest:

In the figure AB = 12 cm , ∠B=30°

a) What is the length of AD ?

b) If BC = 15 cm , Find the area of the triangle.



Hint:

a) Identifying the angles of the triangle as 30°, 60°, 90° (1)

AD = 6 cm (1)

b) 45 sq.cm (1)

Chapter Name:Thrikonamithi *Marks :(6)*

Quest:

Angle	sin	cos
0	0.0000	1.0000
1	0.0175	0.9998
2	0.0349	0.9994
3	0.0523	0.9986
.		
.		
.		
.		
87	0.9986	0.0523
88	0.9994	0.0349
89	0.9998	0.0175
90	1.0000	0.0000

Observing the table we have sin 0 = cos 90 = 0.0000 , sin 1 = cos 89 = 0.0175
sin 2 = cos 88 = 0.0349 ..... Then answer the questions given below.

a) What is the value of sin 90 ?

b) If sin 10 = cos p , what is the value of p ?

c) Find the value of x which satisfies sin x = cos x

d) If sin x = cos y ,then x+y = ...

e) Arrange sin 5, cos 5, sin 10 in ascending order of values.

Hint:

a) sin 90 = 1 or cos 0 (1)

b) p = 80 (1)

c) x= 45 (1)

d) x+y = 90 (1)

e) sin 5 < sin 10 < cos 5 (2)

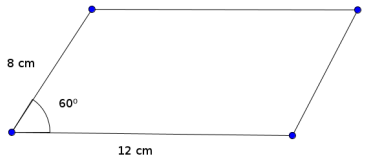
Chapter Name:Thrikonamithi *Marks :(3)*

Quest:

In the figure two sides of the parallelogram are 8 cm , 12 cm and the angle between these sides is 60°.

a) What is the distance between the lengths ?

b) What is the area of the parallelogram ?



Hint:

a) Distance = $4\sqrt{3}$ (2)

b) Area = $48\sqrt{3}$ (1)

Chapter Name:Thrikonamithi *Marks :(2)*

Quest:

a) What is the ratio of the sides of a triangle with angles 45°, 45°, 90° ?

b) What is the length of the hypotenuse of such a triangle if the opposite side of angle 45° is 5 centimetre ?

Hint:

a) 1: 1: $\sqrt{2}$ (1)

b) $5\sqrt{2}$ c.m (1)

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Class Type:
SSE

Class:
X

Subject:
Mathematics

Language:
English

Chapter:
Soochakasankhyakal

Subtitle:
Select

Chapter Name:Soochakasankhyakal *Marks :(4)*

Quest:
Draw the X and Y axes, plot the points (0, 0), (0, 5), (5, 5), (5, 0) . Join the points in order. Write the suitable name for the quadrilateral.

Hint:
To drawX and Y axis (1)

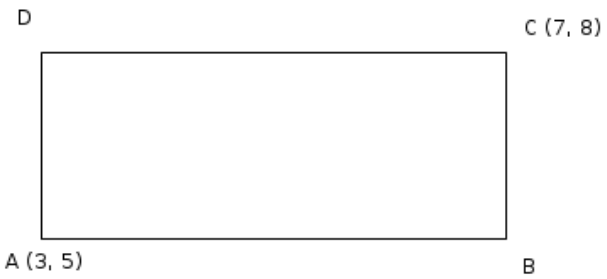
fix and joining the points (2)

square (1)

Chapter Name:Soochakasankhyakal *Marks :(3)*

Quest:

In the figure ABCD is a rectangle and AB is parallel to the X-axis. Write the coordinates of B and D



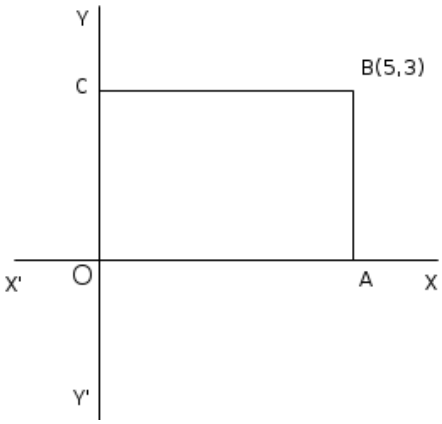
Hint:
Identify the sides AD and BC are parallel to Y axis (2)

B (7, 5) D (3, 8) (1)

Chapter Name:Soochakasankhyakal

Quest:

In the figure OABC is a rectangle. Write the coordinates of O, A and C.



Hint:

O (0, 0) (1)

A (5, 0) (1)

C (0, 3) (1)

Chapter Name:Soochakasankhyakal *Marks :(4)*

Quest:

Draw X, Y axes and mark the points A (1, 1), B (4, 1), C (4, 4), D (1, 4). What is the most suitable name of the figure obtained by joining these points in order.

Hint:

draw the axes (1)

Mark the points and complete the quadrilateral (2)

square (1)

Chapter Name:Soochakasankhyakal *Marks :(2)*

Quest:

Centre of a circle is (2, 3) and radius is 7 units. Examine whether the point (8, 2) is on the circle .

Hint:

$\sqrt{(8-2)^2+(2-3)^2} = \sqrt{37}$ 1

$\sqrt{37} < 7$

The point is inside the circle. 1

Chapter Name:Soochakasankhyakal *Marks :(3)*

Marks :(3)

Quest:

Classify the following points as points on the x-axis, on the y-axis and not on the axes

(4, 0), (0, 7), (3, 2), (1/2, 0), (0, 3/4), (-2, √2)

Hint:

The points on X axis are (4, 0), (1/2, 0) (1)

The points on Y axis are (0, 7), (0, 3/4) (1)

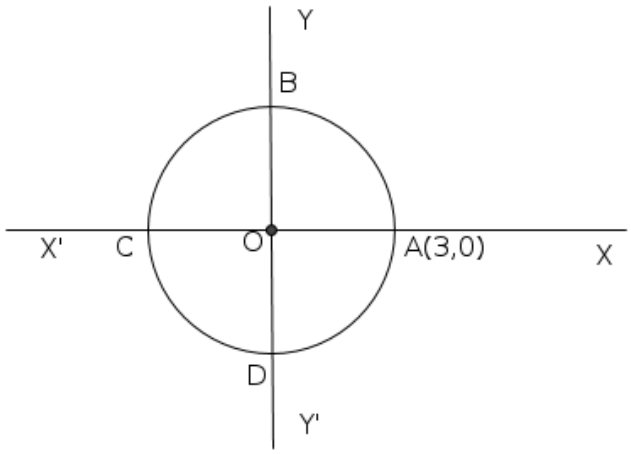
Other points (3, 2), (-2, √2) (1)

Chapter Name:Soochakasankhyakal

Marks :(3)

Quest:

In the figure O is the centre of the circle. If the coordinates of A are (3, 0), find the coordinates of B, C, and D



Hint:

.

B (0, 3)

C (-3, 0)

D (0, -3) (3)

Chapter Name:Soochakasankhyakal

Marks :(2)

Quest:

The opposite vertices of a rectangle having sides parallel to the axes are

(-2, 3), (5, 6).

Find the coordinates of the other vertices

Hint:
.i) (5, 3), (-2, 6) (2)

Chapter Name:Soochakasankhyakal *Marks :(4)*

Quest:
Draw X, Y axes and mark the points (-3, -1), (2, -1), (3, 2), (-2, 2) . What is the most suitable name of the figure obtained by joining these points in order.

Hint:
To draw the axes (1)

Mark the points and complete the quadrilateral (2)
Parellelogram (1)

Chapter Name:Soochakasankhyakal *Marks :(3)*

Quest:
P (7, 3), Q (-5, 3) are two points on a line

a) Write the coordinates of another point on PQ

b) Write the coordinates of two points on a line which is parallel to PQ

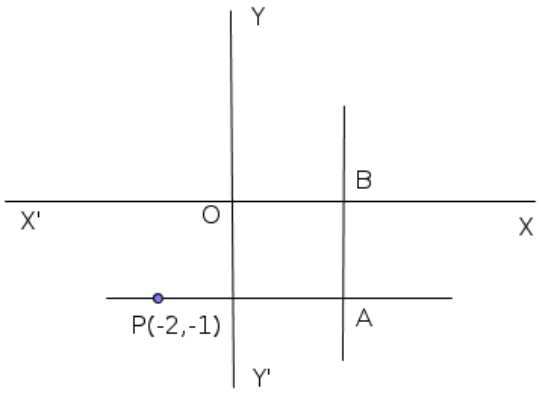
Hint:
(6, 3), (5, 3), (4, 3), ... (1)

identify the line parallel toPQ also parrallel to Xaxis. (1)

(6, 2), (5, 2), ... (1)

Chapter Name:Soochakasankhyakal *Marks :(2)*

Quest:
In the figure, O is the origin and co-ordinates of the point P is (-2, -1). PA is parallel to X axis and AB is parallel to Y axis. If PA = 5 units, Find the coordinates of A and B



Hint:

A (3, -1) (1)

B (3, 0) (1)

Chapter Name:Soochakasankhyakal *Marks :(3)*

Quest:

A (5, 2), B (5, 7) are two points on a line

a) Write the coordinates of another point on AB

b) Write the coordinates of two points on a line which is perpendicular to AB

Hint:

(5, 3), (5, 1), (5, 0), ... (1)

the line AB is parallel to Y axis

Identify the line perpendicular to AB is parallel to X axis (1)

(2, 3), (5, 3), ... (1)

സമഗ്ര ചോദ്യോത്തരങ്ങൾ

Class Type:
SSE

Class:
X

Subject:
Mathematics

Language:
English

Chapter:
Thoduvarakal

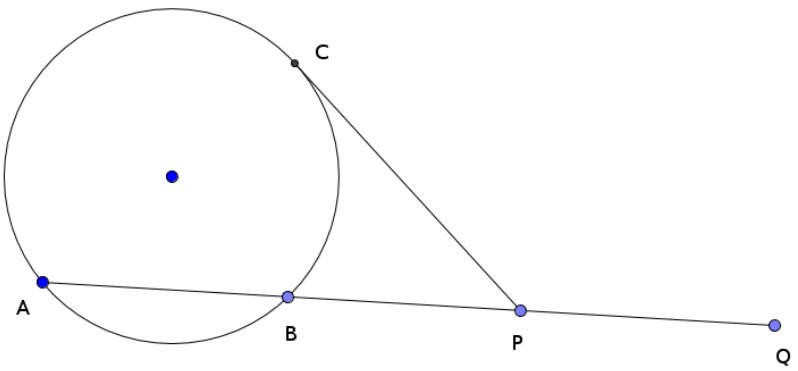
Subtitle:
Select

Chapter Name:Thoduvarakal *Marks :(4)*

Quest:
In the figure PC is the tangent to the circle, If PC = 12 cm , PB = 8 cm and PQ = 2 cm find

a) the length of AP

b) the length of the tangent from Q to C



Hint:
PA X PB =PC2 (1)

PA = $\frac{144}{8}$ = 18 (1)

QA = 20, QB = 10

QC2 = 20 x 10 = 200 (1)

QC = 200 = 102 (1)

Chapter Name:Thoduvarakal *Marks :(4)*

Quest:
Area of a right triangle is 60 sq. cm. And its inradius is 3cm. Find

a). the perimeter of the triangle

b). the length of the hypotenuse of the triangle

Hint:
semiperimeter = $\frac{60}{3}$ = 20 (1)

perimeter = 40 (1)

Hypotenuse

= s - r = 20 - 3 = 17 cm (1)

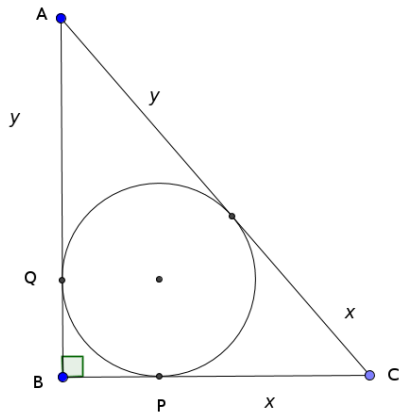
Chapter Name:Thoduvarakal *Marks :(4)*

Quest:
In the figure , ABC is a right triangle BP = 3 cm. If the hypotenuse of the triangle is 15 cm. , find

a). the inradius of the circle

b). the perimeter of the triangle

c). the area of the triangle



Hint:
r = 3 cm (1)

Perimeter = x + y + x + y + 3 + 3 = 15 + 15 + 6 = 36 (2)

Area = 3 X 18 = 54 sq.cm. (1)

Chapter Name:Thoduvarakal *Marks :(4)*

Quest:
Draw a circle of radius 3 cm. Construct an equilateral triangle such that all the sides touching the circle.

Hint:
For Drawing circle of radius 3 cm (1)

Drawing radii by marking centre angles = 120º(1)

For Drawing perpendiculars to radii(1)

For completing the triangle (1)

Chapter Name:Thoduvarakal *Marks :(5)*

Quest:
Draw a triangle of sides 8 cm, 7 cm, and 6 cm . Draw its incircle and measure the inradius.

Hint:
For Drawing triangle (1)

For Drawing angle bisector(1)

For Drawing radius(1)

ForDrawing incircle(1)

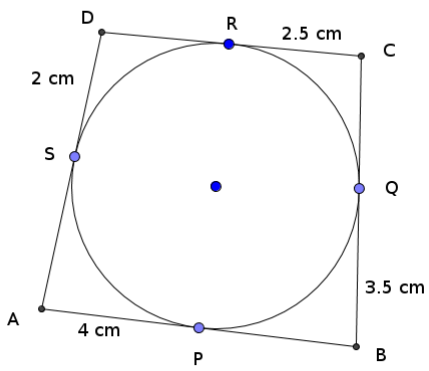
For measuring and writing radius(1)

Chapter Name:Thoduvarakal *Marks :(3)*

Quest:
The sides of the quadrilateral ABCD touches the circle at P,Q,R and S

a). Find the length of AS

b). Find all the sides of quadrilateral ABCD.



Hint:
AS = AP = 4 cm (1)

For finding AD, AB, BC, CD (2)

Chapter Name:Thoduvarakal

Quest:
The sides of a triangle are 13 cm, 14 cm and 15 cm.

a). Find the perimeter of the triangle

b) Find Area of the triangle

c) Find Inradius of the triangle

Hint:
Perimeter = 13 + 14 + 15 = 42 cm (1)

S = $\frac{42}{2}$ = 21 cm (1)

Area = $\sqrt{21\times8\times7\times6}$ (1)

= 84 sq.cm (1)

r = $\frac{84}{21}$ = 4 cm (1)

Chapter Name:Thoduvarakal *Marks :(4)*

Quest:
The perpendicular sides of the right triangle are 9 cm and 12 cm.

a). Find the perimeter of the triangle

b). Find the area of the triangle

c). Find the inradius of the triangle

Hint:
Hypotenuse= 15 cm (1)

Perimeter = 9 + 12 + 15 = 36 (1)

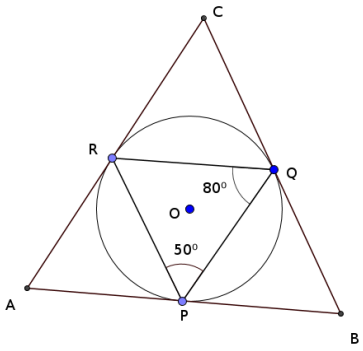
Area = $\frac{1}{2}$ X 9 X 12 = 54 (1)

r = $\frac{A}{S}$ = $\frac{54}{18}$ = 3 cm (1)

Chapter Name:Thoduvarakal *Marks :(4)*

Quest:
In the figure , incircle of triangle ABC touches the sides of the triangle at P, Q and R. Find the angles of triangle ABC

Marks :(5)



Hint:

∠POR = 2 X 80^0 = 160 (1)

∠ A = 20^0 (1)

∠C = 80^0 (1)

∠B =80^0 (1)

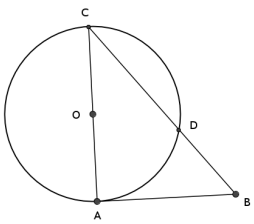
Chapter Name:Thoduvarakal *Marks :(3)*

Quest:

In the figure O is the centre of the circle and AB is a tangents to the circle. BD = 3.6 cm , CD = 6.4 cm Then

a). find the length of AB

b). find the radius of the circle.



Hint:

BC = 10 cm (1)

BD X BC = AB2 = 36 , AB = 6 (1)

AC = 8 cm, radius = 4 cm (1)

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Class Type:
SSE

Class:
X

Subject:
Mathematics

Language:
English

Chapter:
Khanaroopangal

Subtitle:
Select

Chapter Name:Khanaroopangal *Marks :(3)*

Quest:
The base radius and height of cylinder are 10 cm, 12 cm respectively.

a). Find its volume

b). Find the volume of the largest cone that can be carved out from this cylinder.

Hint:
a)Volume of the cylinder = $\pi \times 10^2 \times 12 = 1200\pi$ (1)

b) Volume of the cone = $1200\frac{\pi}{3} = 400\pi$ (2)

Chapter Name:Khanaroopangal *Marks :(5)*

Quest:
How many spheres of radius 3 cm can be made by melting and recasting a metal cone of radius 12 cm and height 15 cm?.

Hint:
Volume of the cone = 720π cm3 (2)

Volume of Sphere = 36πcm3 (2)

Numbrer of spheres = 720π/36π = 20 (1)

സമഗ്ര ചോദ്യോത്തരങ്ങൾ

Class Type:
SSE

Class:
X

Subject:
Mathematics

Language:
English

Chapter:
Jyamithiyum Beejaganithavum

Subtitle:
Select

Chapter Name:Jyamithiyum Beejaganithavum *Marks :(2)*

Quest:
(a) Find Slope of the line passing through (3 ,5) , (4 , 7).

(b) What is the slope a line parallel to this line ?

Hint:
a) Slope = 2 (1)

b) Slope of the parallel line = 2 (1)

Chapter Name:Jyamithiyum Beejaganithavum *Marks :(2)*

Quest:
Write the equation of the line passing through A (0 ,12) and B (16 , 0)

Hint:
Slope = $\frac{-3}{4}$ (1)

Equation of the line is 3x + 4y = 48 (1)

Chapter Name:Jyamithiyum Beejaganithavum *Marks :(3)*

Quest:
The vertices of a triangle are (-3 , 3) , (5 , 3) and (1 , 6) . Prove that it is an isosceles triangle

Hint:
Lengths of sides are 8, 5, 5 (3)

Chapter Name:Jyamithiyum Beejaganithavum *Marks :(4)*

Quest:
Consider the points A (1, 0) , B (7 , 0) C (4 , 4)

a). Which of these points are on the x - axis ?

b). Prove that triangle ABC is isosceles.

Hint:
a) A (1 , 0), B (7 , 0) (1)

b) AC = 5, BC = 5 (2)

AB = AC. so it is an isosceles triangle (1)

Chapter Name:Jyamithiyum Beejaganithavum *Marks :(4)*

Quest:
Consider the points L (9, 2) and M (1 , -2)

a). What is the slope of the line LM ?

b). Find the coordinates of two more points on the line

c). Find the coordinates of the point where this line meets the x - axis

Hint:
(a) slope = 12 (1)

(b) For writing other two points (2)

(c) (5 , 0) (1)

Chapter Name:Jyamithiyum Beejaganithavum *Marks :(4)*

Quest:
If A (2,3) and B (6,9) are two points on a line , then

(a) Find the coordinates of the mid point of the line AB

(b) Find the slope of AB

(c) Find the equation of the line having slope $\frac{1}{2}$ and passing through the mid point of AB.

Hint:
(a) (4,6) (1)

(b) $\frac{9-3}{6-2} = \frac{6}{4} = \frac{3}{2}$ (1)

(c) $\frac{y-6}{x-4} = \frac{1}{2}$ (1)

x - 4 = 2y - 12

x - 2y + 8 = 0 (1)

Chapter Name:Jyamithiyum Beejaganithavum *Marks :(5)*

Quest:

P (5 , 2), Q (8 , 6) are two points on a line, then

a). What is the slope of PQ?

b). Write the equation of the line PQ

c). Find the co-ordinates of the point at which the line PQ cut the 'x' axis

Hint:

a). slope = $\frac{6-2}{8-5} = \frac{4}{3}$ (1)

b) If (x, y) is a point on the line $\frac{y-2}{x-5} = \frac{4}{3}$ (1)

. 4x - 3y -14 = 0 (1)

c). In the x axis y =0 (1)

4x -14 = 0

x = $\frac{7}{2}$

The point is ($\frac{7}{2}$,0) (1)

Chapter Name:Jyamithiyum Beejaganithavum *Marks :(3)*

Quest:

If the equation of a circle is $x^2 + y^2 = 4$ then

(a)What is the radius of the circle ?

(b) If the x coordinate of a point on this circle is zero, what is the y- coordinate of that point ?

(c) Write the coordinates of another point on the circle.

Hint:

(a) Radius = 2 (1)

(b) when x=0, y = 2 (1)

(c) coordinates of another point = (0,2) , (-2,0) (1)

Chapter Name:Jyamithiyum Beejaganithavum

Quest:

A circle with centre at (1,3) passes through the point (5,6).

(a) Find the radius of the circle?

(b) Write the equation of the circle.

Hint:

(a) Radius of the circle = $\sqrt{(5-1)^2+(6-3)^2}$ = $\sqrt{4^2+3^2}$ = $\sqrt{25}$ =5

(1)

(a) Equation of the circle $(x-1)^2+(y-3)^2=25$

(2)

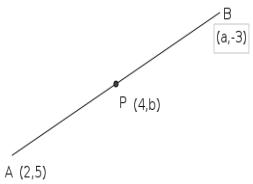
Chapter Name:Jyamithiyum Beejaganithavum *Marks :(2)*

Quest:

A (2,5) and B (a,-3) are joined to get the line AB as in the figure and P (4,b) is the mid point of AB.

a) Find the value of a .

b) Find the value of b .



Hint:

a) a = 6 (1)

b) b = 1 (1)

Chapter Name:Jyamithiyum Beejaganithavum *Marks :(4)*

Quest:

The equation of a circle is $x^2+y^2=9$

(a) Find the radius of the circle ?

(b) Write the coordinates of the centre of the circle .

(c) Find the points of contact of the circle with X axis.

Hint:

Radius = 3 cm (1)

Centre is (0,0) (1)

Points of intersection with the x axis (3,0), (-3, 0) (2)

Chapter Name:Jyamithiyum Beejaganithavum *Marks :(4)* *Marks :(3)*

Quest:

A (2,3) B (6,7) are two points on a line .

(a) Find the slope of AB.

(b) If P is the mid point of AB , then find the coordinates of P.

(c) Write the equation of the line AB.

Hint:

slope = $\frac{7-3}{6-2} = \frac{4}{4} = 1$ (1)

Co-ordinates of P = ($\frac{2+6}{2}$, $\frac{3+7}{2}$) = (4,5) (1)

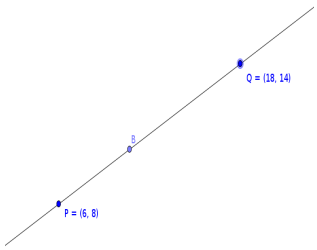
Equation of AB $\frac{y-3}{x-2} = 1$ (1)

x - y + 1 = 0 (1)

Chapter Name:Jyamithiyum Beejaganithavum *Marks :(2)*

Quest:

In the figure PB : QB = 1 : 2. Find the coordinates of the point B



Hint:

x coordinate of B is $6+\frac{1}{3}(18-6)=10$ (1)

y coordinate of B is $8+\frac{1}{3}(14-8)=10$ (1)

Chapter Name:Jyamithiyum Beejaganithavum *Marks :(5)*

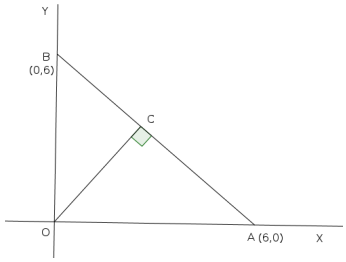
Quest:

In the figure, OC is perpendicular to AB.

(a) Prove that Δ OAB is isosceles ?

(b) Find the coordinates of C ?

(c) Write the equation of the line OC.



Hint:

(a) OA = 6 ,OB = 6 (1)

So triangle OAB is isosceles (1)

(b) C (3,3) (1)

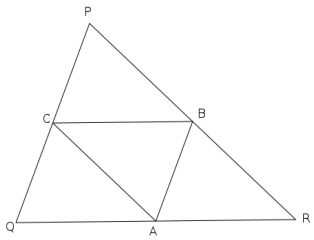
(c) For writing the equation x = y or x – y = 0 (1)

Chapter Name:Jyamithiyum Beejaganithavum *Marks :(3)*

Quest:

In the figure A , B , C are the mid points of QR , PR , and PQ respectively.

A (2,4) R (5,5) B(4,7) .Then write the coordinates of P , Q , and C.



Hint:

C (1, 6) (1)

Q (-1, 3) (1)

P (3, 9) (1)

Chapter Name:Jyamithiyum Beejaganithavum *Marks :(5)*

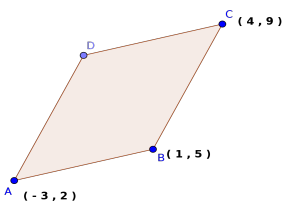
Quest:

The vertices of the parallelogram ABCD are A (-3 , 2) , B (1 , 5) ,C (4 , 9) Then

(a) Write the coordinates of D?

(b) Find the length of AB and AD

(c) Calculate the area of the parallelogram ?



Hint:

(a) D = (0 , 6) (1)

(b) AB = $\sqrt{4^2+3^2}$ = 5 AD = $\sqrt{3^2+4^2}$ = 5 (1)

ABCD is a rhombus (1)

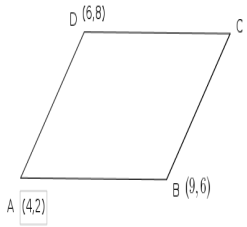
AC = $\sqrt{7^2+7^2}$ = 7 $\sqrt{2}$ BD = $\sqrt{1^2+1^2}$ = $\sqrt{2}$ (1)

Area = $\frac{1}{2}$ x 7 $\sqrt{2}$ x $\sqrt{2}$ = 7 sq.unit (1)

Chapter Name:Jyamithiyum Beejaganithavum *Marks :(2)*

Quest:

In the figure ABCD is a parallelogram. Write the coordinates of point C



Hint:

X coordinate of point C = 9 + 6 - 4 = 11 (1)

Y coordinate of point C = 8 + 6 - 2 = 12 (1)

Coordinates of point C = (11,12)

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Class Type:
SSE
Class:
X
Subject:
Mathematics
Language:
English
Chapter:
Bahupadhangal
Subtitle:
Select

Chapter Name:Bahupadhangal *Marks :(3)*

Quest:
The area of a rectangle is represented by the polynomial P(x) = $x^2 - 6x + 5$,

a) If the length is (x - 1), find the breadth as a first degree polynomial

b) If the length is 5 what is its breadth?

Hint:
a)Length = (x - 1) (1)

If Breadth is x - b then

Area = $x^2 - 6x + 5$ = (x - 1) (x - b)

= x^2 - (1 + b) x + b

b = 5

Breadth = (x – 5) (1)

b) Length = x - 1 = 5, x = 6

Breadth = x - 5 = 6 - 5 = 1 (1)

Chapter Name:Bahupadhangal *Marks :(2)*

Quest:
P(x) is a second degree polynomial.

P(2)=0, and P(-1)=0 then,

a) Which of the following is a factor of P(x)?

i) (x + 2) ii) (x + 1) iii) (x + 3) iv) (x – 1)

b) Find the solutions of the equation p(x) = 0

Hint:

a) (x + 1) 1

b) Solutions = 2, -1 1

Chapter Name:Bahupadhangal *Marks :(3)*

Quest:

If P(x)= $2x^2 - 3x + 5$, then

a) Find P(0)

b) Check whether (x – 1) is a factor of this polynomial

Hint:

a) P(0)=$2(0)^2 - 3(0) + 5$ = 5 (1)

b) P(1)=$2(1)^2 - 3(1) + 5$ = 4 (1)

P(1) is not zero , so (x – 1) is not a factor (1)

Chapter Name:Bahupadhangal *Marks :(4)*

Quest:

If P(x) = (x – 1) (x^2 – x – 6)

i) Find P(1)

ii) Write P(x) as the product of three first degree polynomials.

Hint:

i) P(1) = 0 (1)

ii) (x^2 – x – 6) = (x+2)(x – 3) (2)

P(x) = (x – 1) (x+2)(x – 3) (1)

Chapter Name:Bahupadhangal *Marks :(2)*

Quest:

In the given polynomial $x^3 - 6x^2 + 11x - 6$

a) Find P(1)

b) Write one factor of the polynomial

Hint:

a) P(1) = $1^3 - 6(1)^2 + 11(1) - 6$

= 1 – 6 + 11 – 6 = 0 (1)

b) P(1) =0, (x – 1) is a factor (1)

Chapter Name:Bahupadhangal *Marks :(3)*

Quest:

a) What is the remainder on dividing the polynomial P(x) = $ax^2 + bx + c$ by (x - 1) .

b) Write a polynomial with a factor (x - 1)

Hint:

a) Remainder = P(1) (1)

P(x) = $ax^2 + bx + c$

p(1) = a + b + c

x - 1 is a factor if a + b + c = 0 (1)

b)x^2 + 7x - 8 (1)

Chapter Name:Bahupadhangal *Marks :(2)*

Quest:

(x-3)(x-2) =$x^2 - 5x + 6$, then find the solution of the equation $x^2 - 5x + 6 = 0$

Hint:

(x-3)(x-2) = 0 (1)

For identifying the solutions of $x^2 - 5x + 6$ = 0 as 3 and 2 (1)

Chapter Name:Bahupadhangal *Marks :(4)*

Quest:

(x – 1) is a factor of the polynomial $2x^3 + ax^2 + bx - 9$ and the remainder on dividing by x – 2 is 27. Then

a) What is the value of P(1) ?

b) Find the values of a and b

Hint:

P(1) = 0 (1)

a + b – 7 = 0 (1)

P(2) = 27

4a + 2b – 20 = 0 (1)

Finding the value of a, b (1)

a = 3, b = 4

Chapter Name:Bahupadhangal *Marks :(3)*

Quest:

The polynomial P(a) = a2+50a represents the surface area of a square pyramid with base edge 'a', then

a) What is the slant height of this pyramid ?

b) Find the total surface area of the pyramid with base edge 10 units.

Hint:

a) 2al = 50 a (1)

l = 25 unit

b) Total surface area = P(10) (1)

= 100 + 50 x 10

= 600 (1)

Chapter Name:Bahupadhangal *Marks :(3)*

Quest:

Consider the polynomial P(x) = x2-kx-7,

a) if P(1) = 3 , Find the value of k.

b) Write a second degree polynomial with factor (x - 1)

Hint:

a) 12-k1-7 = 3 (1)

1 - k - 7 = 3

- k - 6 = 3

k = -9 (1)

b) x2 + 9 x - 10 (1)

Any polynomial with factor (x - 1) also can be written.

Chapter Name:Bahupadhangal *Marks :(3)*

Quest:

P(x) is a second degree polynomial. One factor of P(x) is (x – 1)

and if P(7)=0 then

a) Write P(x) as the product of two first degree polynomials.

b) Find the values of x for which P(x) = 0

Hint:

P(x) = (x-1)(x-7) (1)

If P(x) = 0

(x-1)(x-7) = 0 (1)

(x = 1) or (x = 7) (1)

Chapter Name:Bahupadhangal *Marks :(4)*

Quest:

If x-1, x+1 are the factors of ax3+bx2+cx+d then

i) Prove that a=-c, b=-d

ii) If x-1 and x+1 are factors of ax3+bx2-5x+3, what is a and b?

Hint:

x – 1 is a factor.

P(1) = 0 (1)

a+b+c+d=0 ----(1) (1)

-a+b-c+d=0 ----(2) (1)

From (1) and (2)

a=-c, b=-d (1)

a=5, b=-3 (1)

Chapter Name:Bahupadhangal *Marks :(4)*

Quest:

In the polynomial P(x) = 2x3-x2-8x+4

a) Find P(0).

b) Find p (1/2)

c) Write one factor of P(x).

Hint:

a) P(0) = 203-02-80+4= 4 (1)

b) P(1/2) = 2123-122-812+4= 0 (1)

c) 2x – 1 (2)

Chapter Name:Bahupadhangal *Marks :(4)*

Quest:

a) Manu is asked to write the polynomial x2+7x+6 as the product of first degree polynomials. He wrote as follows and stopped

x2+7x+6 = (x-a)(x-b)

x2+7x+6 = x2 - (a+b)x + ab

Help Manu to solve the problem.

b) Find the solutions of the equation

x2+7x+6=0

Hint:

x2+7x+6 = (x-a)(x-b)

x2+7x+6 =x2- (a+b)x + ab

For identifying a+b = -7, and ab=6 (1)

For identifying a=-6, b=-1 (1)

(Finding two numbers with sum as -7 and product as 6)

x2+7x+6 = (x- -6)(x- -1) = (x+6)(x+1) (1)

x2+7x+6 = (x- -6)(x- -1)

For finding the solutions of the equation x2+7x+6 = 0 as x = -6 and x = -1 (1)

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Class Type:
SSE

Class:
X

Subject:
Mathematics

Language:
English

Chapter:
Sthithivivarakanakku

Subtitle:
Select

Chapter Name:Sthithivivarakanakku *Marks :(3)*

Quest:
The number of rubber sheets a farmer got in a week are given below

6, 10,11, 7, 12, 8, 9,

a) Find mean ?

b) Find median ?

Hint:
Mean = 9 (1)

Median = 9 (1)

Chapter Name:Sthithivivarakanakku *Marks :(2)*

Quest:
The daily wages of workers in a factory are given below .

500, 600, 700, 800, 900, 1000, 1100, 1200, 1300, 1400, 1500

a) Find median of their daily wages ?

b) While calculating the median a student wrongly write 15000 instead of 1500. Is there any change in her answer ? Justify ?

Hint:
Median = 1000 (1)

No change in median (1)

Because there is no change in the number of people and 1500 comes last .

Chapter Name:Sthithivivarakanakku *Marks :(2)*

Quest:
The scores obtained by 10 students in mathematics examination are given below

15, 35, 20, 18, 40, 32, 28, 50, 45, 27

Find median score ?

Hint:
For arranging in ascending order

15,18,20,27,28,32,35,40,45,50 (1)

Median = $\frac{28+32}{2}$ (1)

= 30 (1)

Chapter Name:Sthithivivarakanakku *Marks :(2)*

Quest:
The weights of 9 children are given below

18, 31, 35, 28, 17, 19, 32, 24, 20

Find median weight ?

Hint:
Arranging in ascending order

17,18,19,20,24,28,31,32,35 (1)

Median= 24 kg (1)

Chapter Name:Sthithivivarakanakku *Marks :(5)*

Quest:
The daily wage of 40 employees in an office are given below as a table.

Daily wage	No of families
1000 - 2000	4
2000 - 3000	9
3000 - 4000	11
4000 - 5000	8
5000 - 6000	6
6000 - 7000	2

Find the median of wage.

Hint:
.For identifying median as the mean of daily wages of 20th and 21st employee (1)

For finding the median (3)

Chapter Name:Sthithivivarakanakku *Marks :(5)*

Quest:
The power consumption of some families in the month of August is given below as a table.

Power consumption (unit)	No of families
150 - 160	15
160 - 170	20
170 - 180	12
180 - 190	8
190 - 200	10
Total	65

(1) The power consumption of which family comes as median

(2) Find the median

Hint:
.(1) For preparing cumulative frequency table (2)

33 rd family (1)

(2) For finding median (2)

Chapter Name:Sthithivivarakanakku *Marks :(2)*

Quest:
The scores of eight students in an examination is given below. Find the median of scores.

42, 16, 31, 36, 19, 41, 23, 14

Hint:
.(1) For writing in ascending or descending order (1)

(2) For finding the median (1)