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OBJECTIVE QUESTION SERIES
MATHEMATICS
TERMS I & II
FOR SSLC EXAMINATION 2018 MARCH

സ്റ്റാൻഡേർഡ് X

ഗണിതം

കേരളസർക്കാർ
വിദ്യാഭ്യാസവകുപ്പ്

സംസ്ഥാന വിദ്യാഭ്യാസ ഗവേഷണ പരിശീലന സമിതി (SCERT), കേരളം
2016
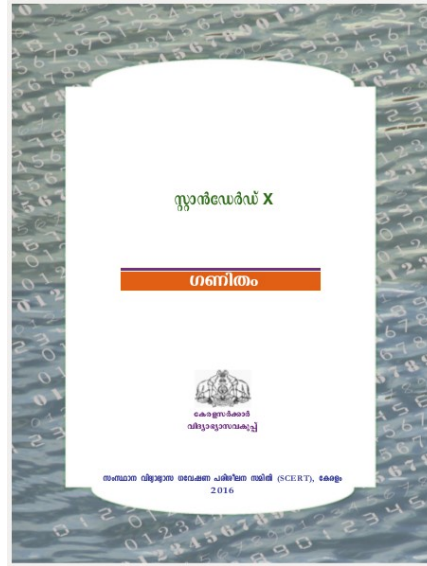
ഗണിതശാസ്ത്രപഠനം നമ്മുടെ വിദ്യാഭ്യാസ പദ്ധതിയുടെ സുപ്രധാന ഘടകമാണ്.അതോടൊപ്പം

ആശയങ്ങളുടെ ഗ്രഹണം നമ്മുടെ ഗണിത ശാസ്ത്രപഠനത്തിന്റെയും സുപ്രധാന ഘടകമാണ്.ആശയങ്ങളുടെ

പ്രയോഗം തുടർന്നുള്ള ഘട്ടം മാത്രമാണ്. ആശയാധിഷ്ഠിതമായ ലളിതമായ ചോദ്യങ്ങൾക്ക് ഉത്തരം നൽകി

മുന്നോട്ട് പോകുന്നതിലൂടെ വിഷയത്തോടുള്ള താൽപര്യവും വർദ്ധിക്കും.അത് കൂടുതൽ കഠിനമായ

ആശയങ്ങളിലേക്ക് കടക്കവാനുള്ള പ്രേരണയും നൽകും.

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ARITHMETIC SEQUENCES

1) Find the common difference of -6 , -2 , 2 , 6 .

2) The 11th and 17th terms of an AS are 33 , 67. Find 14th term.

3) The 7th and 9th terms of an AP are 13 , 21. Find 8th and 10th terms.

4) The 11th and 17th terms of an AS are 33 , 63 . Find common difference.

5) If 30 is added with the 10th term of an AP we get 16th term Find common difference.

6) The sum of 15th and 20th terms of an AP is 80. What will be the sum of 10th and 25th terms?

7) The difference of 15th and 20th terms of an AP is 80. What will be the difference of 10th and 15th terms ?

8) The common difference of an AP is 5 , 10th term is 30. Find 6th and 14th terms.

9) The 11th and 17th terms of an AS are 33 , 63 .Find first term.

10) 15 , x - 3 , 31 are three consecutive terms of an AS , what is the value of x?

11) The sum of first 7 terms of an AP is 77. Find the 4th term.

12) Can the difference of any two terms of the sequence 10 , 13 , 16 ,.....be 60?

13) Can the sum of any two terms of the sequence 112 , 120 , 128 ,.....be 999?

14) 10th term of an AS is 100. What is the su of 7th and 13th terms?

15) One term of an AS with common difference 6 is 55. Is 110 another term?

16) The remainder when 12th term of an AS is divided by common difference is 2. what about when 13th term

is divided?

17) The sum of 6 consecutive terms of an AS is 90 , What is the sum of first and 6th terms ?

18) Does 13 , 21 , 29 ,.... contain 100 ?

19) Which term of 107 , 103 , 99 ,....... is -1 ?

20) Which is the first 4 digit number of the sequence 4 , 7 , 10 .....

21) How many terms are there in the sequence 33 , 44 ,55 ,........253.

22) Write an arithmetic sequence with 6 terms and their sum 90.

23) Write an arithmetic sequence with 5 terms and their sum 80.

24) What is the sum of first 77 natural numbers ?

25) There are 100 terms in an AS. Their sum is x . If each term of the sequence is multiplied by 5, what will be

ARITHMETIC SEQUENCES

their sum. Suppose each term is increased by 1, what will be the new sum ?

26)Is it possible that the sum of 25 consecutive terms of any AS give a sum 303.

27) The sum of first 10 terms of an AP is 100 , Sum of first 11 terms is 107. Find the 11th term.

28) The algebraic form of an AS is 5n – 3. Find first term and common difference.

29) The n th term of an AS is 3 – 2n, Find the 10th term.

30) The n th term of an AS is 2n + 1, Find the (n+1)th term.

31) How much more will be the sum of next 5 terms than the first 5 terms if the common difference is 3?

32) The algebraic form of an AS is $2n^2 + 3n$. Find first term and common difference.

33) The sum of first 10 terms of an AS is $2n^2 + 3n$. Find sum of first 10 terms.

34) Out of the following expressions which one does not represent the nth term or sum of n terms of an AS.?

   $2n$, $2n +1$, $n^2 + 2n$, $n^2 + 2$, n^2

35) Find the difference of sum of first 10 terms of the two sequences   4, 7 , 10 .....and   5, 8 11 , ...

36) If 3^1 x 3^2 x 3^3 x 3^4 x . . . . . .3^{10} = 3^n .Find n

37) Can the sum of first n terms of an AS be 1001?

CIRCLES
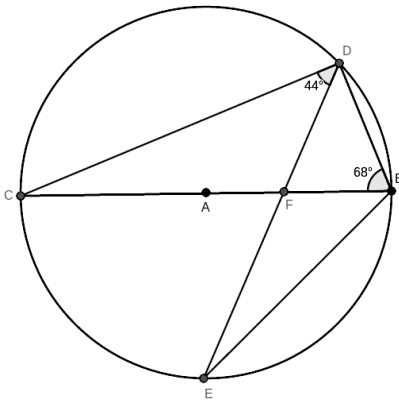
1) In the above figure CB is the diameter. Find the following angles.

    a) ∟CDB ,

    b) ∟EDB ,

    c) ∟CBE ,

    d) ∟DEB
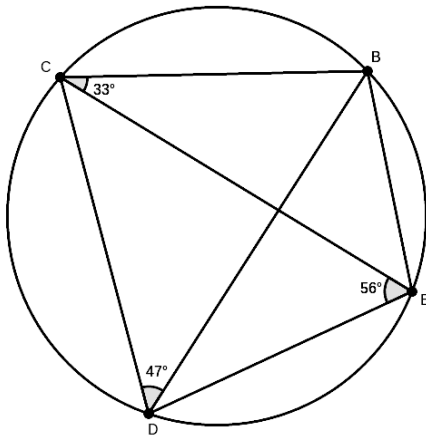
2) From the above figure, find the required angles.

    a) ∟BDE

    b) ∟CBD

    c) ∟CBE

    d) ∟DBE

    e) ∟DCE
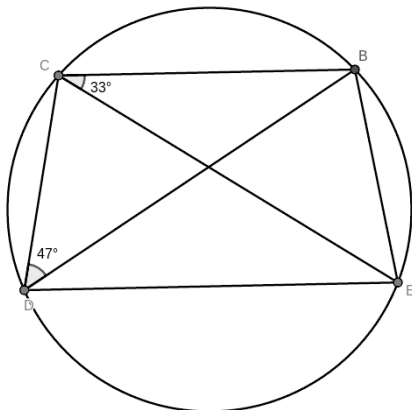
3) In the above figure, CB is parallel to DE. find the required angles.

    a) ∟BDE

    b) ∟CBD

    c) ∟CED

    d) ∟CEB
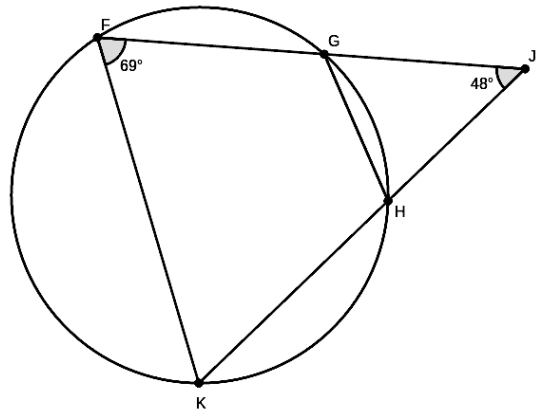
4) From the above figure, find the required angles.

    a) ∟GHK

    b) ∟GHJ

    c) ∟JGH

    d) ∟FGH

    e) ∟FKH
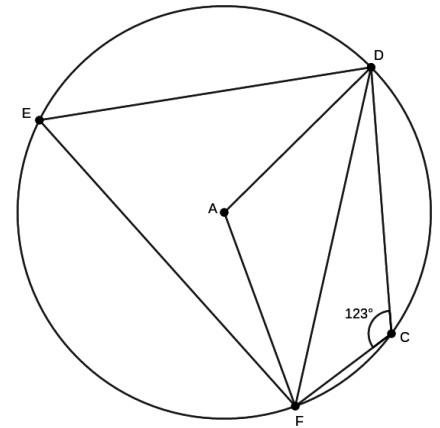
5) From the above figure, Find required angles.

    a) ∟DEF

    b) ∟DAF

    c) ∟ADF

    d) ∟AFD
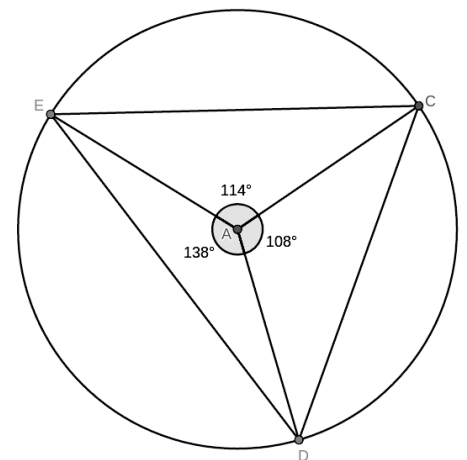
6) From the above figure, Find required angles.

a)∟EDC
b)∟DCE
c)∟DEC
d)∟AEC
e)∟ACE
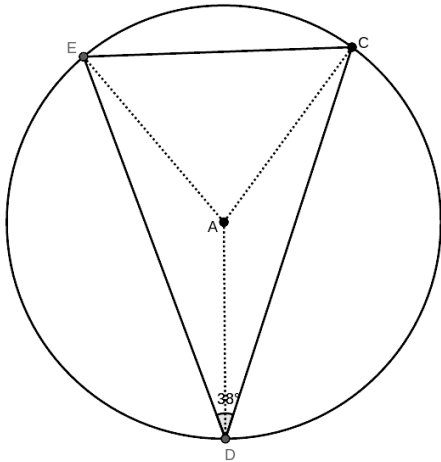
7) In the above figure DE = DC. Find required angles.
a)∟EAC
b)∟DCE
c)∟ACE
d)∟ACD
e)∟ADC
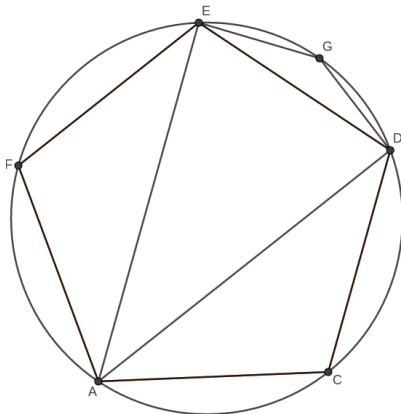
8) In the abovepentegon, all the sides are equal.Find required angles.
a)∟ACD
b)∟DAC
c)∟FAE
d)∟EAD
e)∟EGD
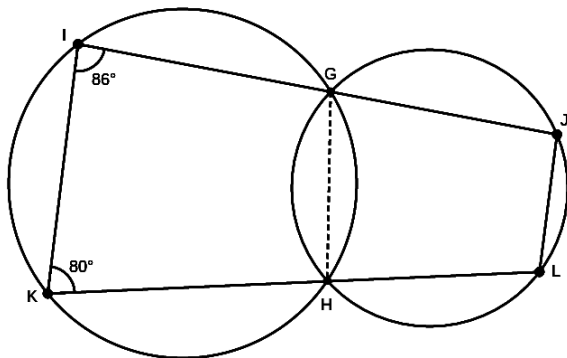
9)From the above figure, Find required angles.
a)∟KHG
b)∟GHL
c)∟GJL
d)∟HLJ
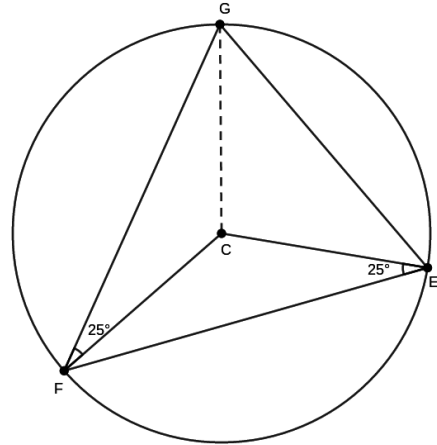
10)From the above figure, Find required angles.
a)∟FCE
b)∟FGE
c)∟FGC
d)∟EGC
e)<GEC
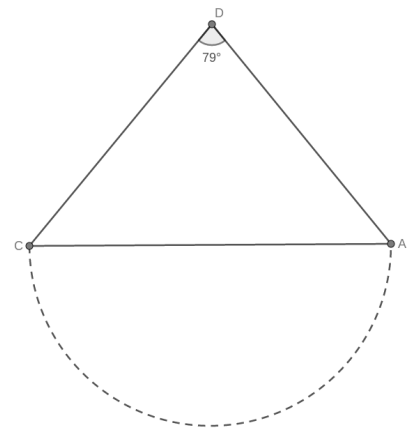
11)In the above figure <D = 79^0. suppose a circle is drawn with CA as diameter. Will it pass through D?
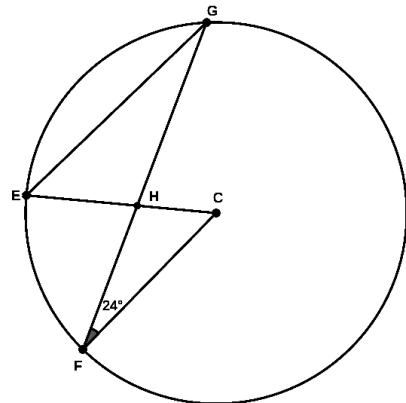
CIRCLES

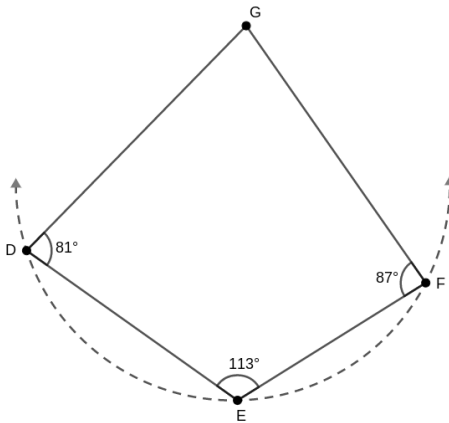12) In the above figure, EG is parallel to FC.
find the required angles.
a) ∟EGF
b) ∟ECF
c) ∟FHC
d) ∟EHG
e) ∟GEC
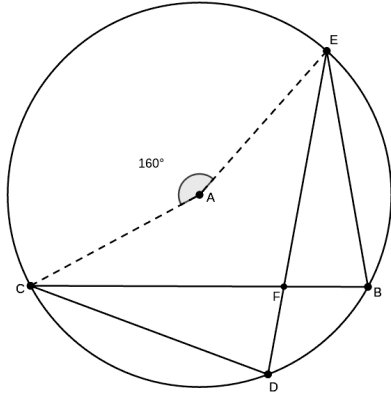
13) From the above figure, EF = EB. Find required angles.
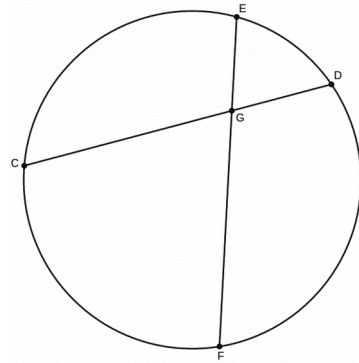a) ∟CBE
b) ∟EFB
c) ∟FEB
d) ∟DCB

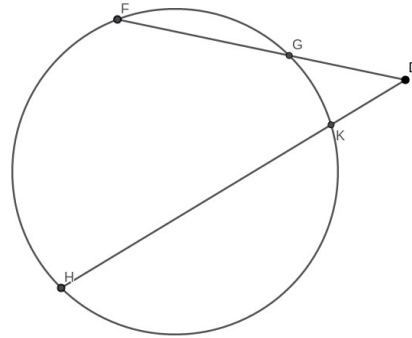14) In the above figure suppose a circle is drawn through the 3 vertices. Will it pass through the fourth vertex ?
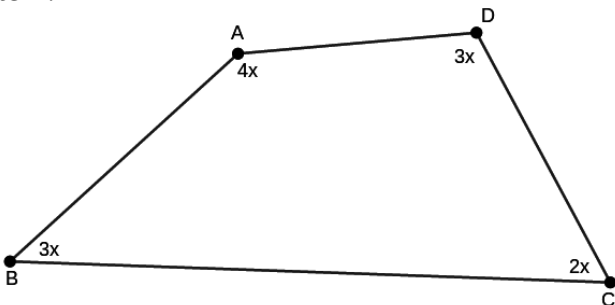
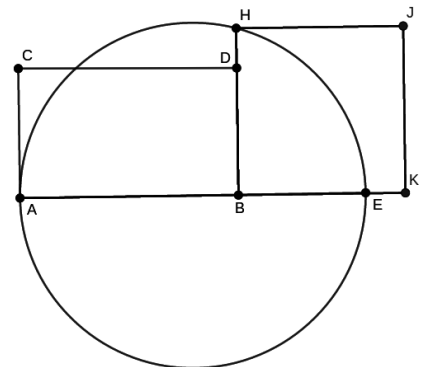15) The angles of a quadrilateral are in the ratio 3:2:3:4.
a) find the angles
b) Is the above quadrilateral cyclic ?

16) In the above figure CG = 24 cm. GD = 15 cm. GF = 18cm. Find GE.

17) In the above figure . HK = 15 cm. KD = 9 cm. GD = 6cm. Find GF

18) In the above figure AB = 12cm .BD = BE =3cm. A circle is drawn with AE as diameter..
a) Find the area of rectangle.
b) Find the area of square.

19) In the above Isoceles trapezium , AB is parallel to CD. AD = BC. <D = 65^0 .
b) Find all angles.
c) Is It cyclic?

PROBABILITY

1. Two coins are tossed up.
     a) what are the out come?   b) What is the chance of getting two Heads ?
     c) That of getting both ?   d) Atleast one Head?
     e) Both are of same type ?

2) What is the probability that the birth day of a person comes in a month with 31 days ?

3) The probability that a person passes an exam is 5/7. What is the chance of his failure?

4) It is heard that one wheel of a bus with 6 tyres is damaged. What is the chance that it is a back   tyre ?

5) A box contains apple and orange, in total 60. Their ratio is 3:2.
     a) If one is taken at random, what is the chance that it is an apple ?
     b) How many apples are there?

6) A die written 1 to 6 is thrown. What is the probability of getting following.
     a) an odd number   b) An even number
c) A prime number   d) a composite number ?

7) A person is asked to tell a two digit number. Tell the chance of occurrence of following
     a) both digits are same   b) sum of digits 11
     c) it is a multiple of 5   d) one is twice the other

8. A box contains 10 balls of which 4 white and 6 black. Another box contains 12 balls of which 6   white 6 black. One ball is to be taken from any one of the boxes.
     a) What is probability of selecting the first box ?
     b) What is the probability of getting a black ball from first box?
     c) If we prefer a white ball which box has a better chance ?
d) suppose balls in two boxes are put together. will the chance of getting a white ball increase?

9) A box contains 10 balls of which 4 white and 6 black. Another box contains 12 balls of which 6   white 6 black. One ball is to be taken from any one of the boxes. One ball from each boxes are taken and paired.
     a) How many pairs are possible ?   b) What is the chance that both are white?
     c) What is the chance that at least one is black ? d) what is the chance that they are of mixed colour ?

10) Without looking in to the figure, a dot is put in side. Find the probability that it falls in side the shaded region?
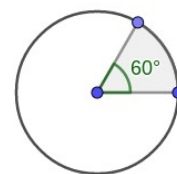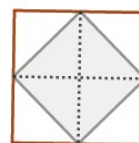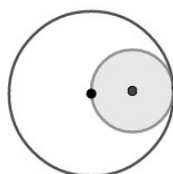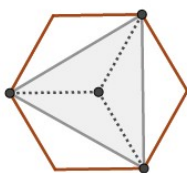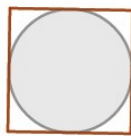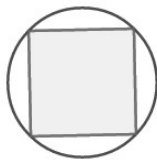
Note : area of a square = $\frac{1}{2} d^2$. Area of a rhombus = $\frac{1}{2} d_1 d_2$

1. Expand using suitable Identity.

      a) $(2x + 3)(x - 1)$,   b) $(2x + 3)(2x - 3)$,   c) $(x + 2)^2$,   d) $(2x - 3)^2$

2.Write as a perfect square.

      a) $x^2 + 12x + 36$,   b) $x^2 - 10x + 25$,   c) $x^2 - 5x + 25/4$,   d) $4x^2 - 20x + 25$

3.What number should be added with the following to make it a perfect square?

      a) $x^2 + 8x$,   b) $x^2 - 14x$,   c) $x^2 + 7x$,   d) $x^2 - x$,   e) $x^2 + \frac{3}{4}x$

4. Find the value of x in the followin equations. (Solve)

      a) $x^2 = 49$,   b) $3x^2 = 48$,   c) $x^2 - 4 = 7$,   d) $(x + 2)^2 = 25$,

      e) $(x - 2)^2 = 25$,   g) $(x - 1)^2 = 5$,   h) $(x + 3)^2 = 7$

5.Solve the equations using completing the square method.

      a) $x(x + 2) = 483$,   b) $x(x + 1) = 1406$,   c) $2x^2 + 16x = 130$

      d) $2x^2 + 3x = 44$,   e) $x(x + 2) = 5$

6.Solve the equations using completing the formula.

      a) $x^2 + 5x + 6 = 0$,   b) $x^2 - 5x + 6 = 0$,   c) $x^2 + 5x = 6$

      d) $x^2 - 5x - 6 = 0$,   e) $2x^2 - 2 = 3x$,   g) $x^2 + 2x - 1 = 0$

7. Form algebraic equations of the following concepts. Write in the form $ax^2 + bx + c = 0$.

  a)The product of two consecutive natural numbers is 306.

  b)The product of two consecutive odd numbers is 143.

  c)The product of two consecutive multiples of 3 is 180.

  d)The product of two cosecutive terms of an AP with common difference 4 is 117.

  e)The sum of squares of two consecutive even numbers is 100.

  f)The length of a rectangle is 3 more than breadth.Its area is 108 sq.unit.

  g) One of the smaller side of a right triangle is 2 more than twice the other. Its area is 30 sq.unit.

  h)The sum of first few continuous natural numbers is 171
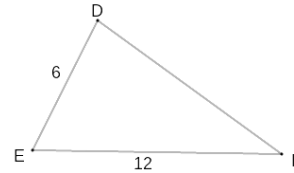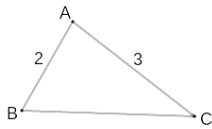
  i) The sum of two integers is 17. their product is 66.

  j)The sum of a number and its reciprocal is 5/3.

TRIGONOMETRY

1)The two triangles in figure have same angles.
a)Find the length of DF , BC.
b)Write the ratio of sides of both triangles.

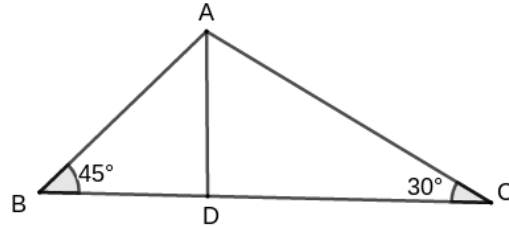2)a)Write the ratio of sides of a triangle of angles, 30^0, 60^0 , 90^0 .
   b)Write the ratio of sides of a triangle of angles,45^0, 45^0 , 90^0.

3) In figure AD is perpendicular to BC.
 a) Find <BAD , <CAD.
 b)If AD = x , write all the sides of the triangle in terms of x.
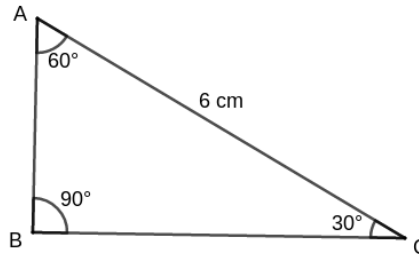 c) Write the ratio of sides of triangle ABC.

4)In figure hypotenuse is 6cm long.
  a) what is the ratio of sides?
  b)If AB= x , find BC , AC
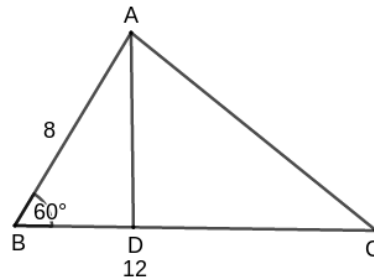 b) From AC , find value of x.
  c) Find length of remaining sides.

5) In figure, AB=8cm , BC=12cm. AD is perpendicular to BC.
 a) If BD = x , write AB , AD in terms of x.
 b) From AB find x.
 c) Find length of AD.
 d) Find area of triangle ABC.(½ bh)

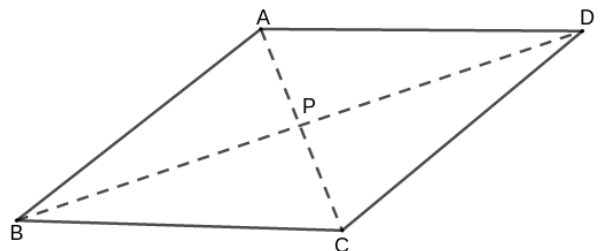6) ABCD is a rhombus of one angle <ABC = 60^0, longest diagonal BD= 10cm.
a)Find the angles of triangle ABP.
b)write length of BP.
c) If AP =x , write BP in terms of x.
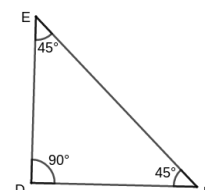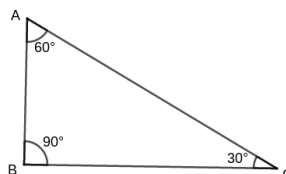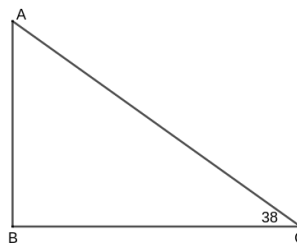d) Find length of AP , AC.
e)Find area of rhombus.(½ x AD x AC)

7)In figure , by taking the length of smallest side as 1cm. Write the length of other sides. Also write the Sin ,Cos , Tan values of the angles, 30^0, 60^0 , 45^0
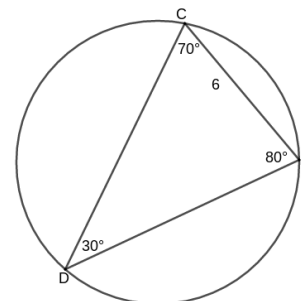
8) In the right triangle ABC, $<C = 38^0$. BC = 7 cm.
 a) Taking TanC, find AB.
 b) Taking CosC, find AC.

9) In the given triangle, the side against 30^0 angle is 6cm.
a)Find circum radius.(d = a/sinA)
b)Find side against 70^0 angle.(d = c/sinC)
c)Find the third side.

10)The radius of a circle is12cm.Find the length of a chord of central angle 90^0. (l= d.Sin(C/2)

11) The circum radius of a circle of angles, $50^0, 60^0, 70^0$ is 8cm.Find all the sides. (d=a/sinA)

12)Two sides of a triangle are 12cm,15cm.The angle between them is50^0.Find area.(A=½ abSinC)

13).Two sides of a triangle are 12cm,15cm.The angle between them is 60^0.
Find the third side ($c^2 = a^2 + b^{2 -} 2abCosC$)

14).Draw rough figures based on the following concepts and find various measures.

a)from the top of a building 25m high, the base of a building under construction is observed at an angle of depression 30^0. After the completion of the work , it was again observed at an angle of elevation 30^0.

b)Standing on the foot of a building 20 m high, the top of a tower in front of it is observed at an angle of elevation 70^0. on the other hand from the bottom of tower , the top of the building is observed at an angle of elevation 40º.

c) A man on ground observe a helicopter flying at a speed of 50m per second at an angle of elevation 70^0. after 5 seconds it is seen at an elevation 60^0.

d) From a ship , a mountain top is observed at an angle of elevation 45^0. after moving 500m ahead, it is seen at 60^0.

e)A man of height 1.5m standing in between two towers 20m apart , observe their tops at angles of elevation 40^0 , 50^0.

f)A pole of length 5m is leaned against a wall makes an angle 40^0 with the floor.

g)The diameter of a cone is at an angle 50^0, with the slant height. Diameter is 10cm long.

h)when the sun is at an angle of elevation 50^0, the length of its shadow is 10m.

i)A man standing on the bank of a river observe the top of a building on the other bank at an angle of elevation 20^0. after crossing the river and standing on the other bank he sees it at 50^0. The building is 32 m high.
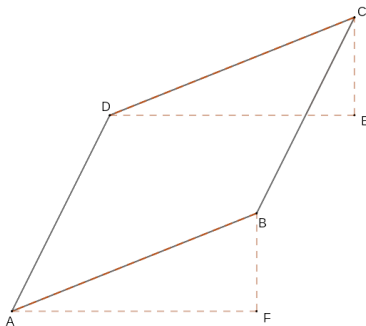
1)Consider the points
A(2,3),B(2,1),C(4,3),D(2,5),E(0,3),F(3,0). From this,
a)Write those on X Axis.
b)Write those on Y Axis.
 c)Write those points on a line parallel to X Axis.
d)Write those points on a line parallel to Y Axis.
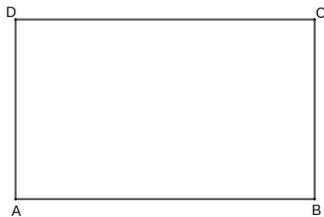
2)In the above figure , the Axes are parallel to the
sides. The co-ordinate of one pair of opposite vertices
are.(-4 , 2) , (5,-3).
a) Mark it properly
b)Find Length and
Breadth.

3)In the above figure, co-ordinates of three vertices of
the parallelogram are ,A(2,1) , B(6,3) C(9, 5).
a)Write the length of AF , FB ,DE , EC.
b)Write the co-ordinate of D.

4)Consider the points, A(1,5) , B(2,8) , C(3,11).
a)Find the slope of AB,BC.
b)Find the length of AB,BC,AC.
c) Is it true that AB + BC = AC ?
d)IsA , B , C points on same line?

23)Consider the triangle with vertices ,A(-6,0), B(15,0)
and C(0,8).
a)Find the length of side.
b)Find the area using heron's formula.
c)Find the radius of In-Circle.
d)Write the co-ordinate of centroid.
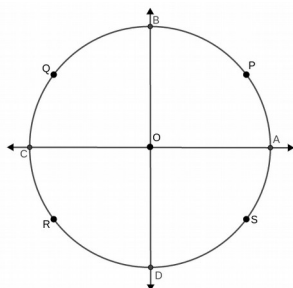

6)In the above figure,P(3,2) is a point on it.
a)b)Find the radius of circle.
b)Write the co-ordinate of A,B,C.
c)Write the co-ordinate ofQ,R,S.
d) Write the position of the points X(0,4),Y(2,3),Z(2,2)
with respect to the circle.

7)The co-ordinate of the vertices of a quadrilateral
are,A(2,5) , B(6,7), C(7,10) , D(3,8).
a)Find the slope of opposite sides.
b)Find the mid points of the diagonals.
 c)Find the length of diagonals.
d)Write a suitable name of the figure.

8)A(-6,8) , B(2,14) , C(8,6), are the vertices of a
triangle.
a) Find the length of sides.
b)Is it true that $AB^2 + BC^2 = AC^2$?
c)Find the slopes of sides.
d)Find the product of slopes of AB,BC.
e)What type of triangle it is?
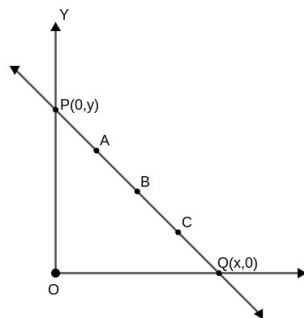
9)Two points of a
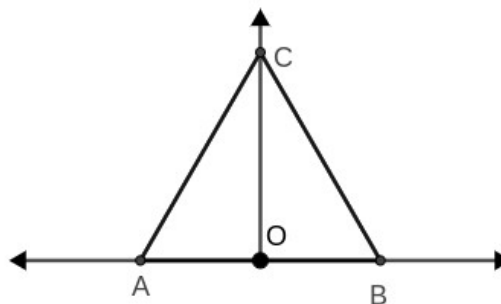line are, A(1,6) ,
B(3,3).
a)Find the slope of
the line.

b)Write another point of the line.
d)Write the point where the line crosses X Axis.
e)d)Write the point where the line crosses Y Axis.

10)Two points of a line are, A(4,2) , B(9,7)
a)Find the mid point of
b) Find a point which divide AB in the ratio 3:2.
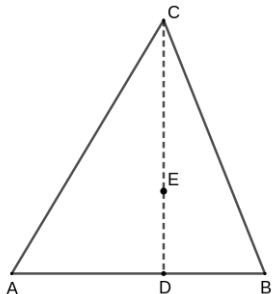c)Find a point P such that AP:PB = 2:3


11)In the above figure, triangle ABC is an isosceles

Co-ordinate geometry

triangle with <A = <B = 30^0. A(-2,0),B(2,0) are two vertices.
a)Find the length of AO.
b)Write the angles of the right triangle AOC.
c)Write the ratio of its sides.
d)Find the length of OC.
e)Write the co-ordinate of C.

12)The vertices of the above triangle are, A(5,-2) , B(7,-2), C(6,4).
a)Find the mid point of AB.
b)Find the length of median.
c)Write the ratio in which centroid divide the median?
d)Find the co-ordinate of centroid.
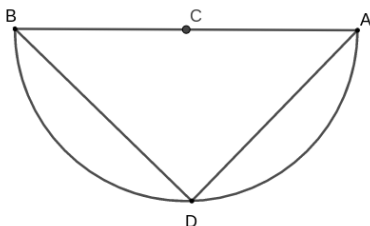
13)In the above semicircle, C(1,7) is the centre. One end point of the diameter is A(8,6), D(2,y) is a point.
a)Write the co-ordinate of other end B of the diameter.
b)Write measure of <ADB.
c)Write slopes of AD and BD.
d) Write the co-ordinate of D.
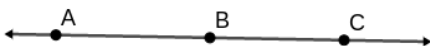
14) Two points of a line are,A(2,5) , B(4,8).
a)Write the slope of AB.
b)If C(x,y) is another point on it , write slope of BC.
c)Write equation of the line.
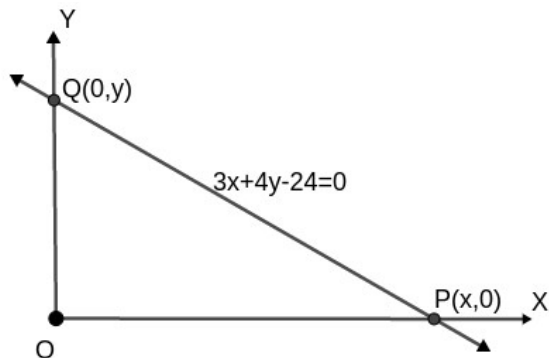
15) In the above figure, consider the line with equation $3x+ 4y- 24 = 0$.
a) Is (4,3) a point on it.
b) Find the points where it intersect the X Axis.
c)Find the points where it intersect the Y Axis.
d)Find the slope of the line.

16)Write the equation of following circles.
a) Centre is the origin. Radius 8cm
b) Centre is (1,-2), Radius 8cm.
c) Centre is (1,-1) , Passes through (4,3).
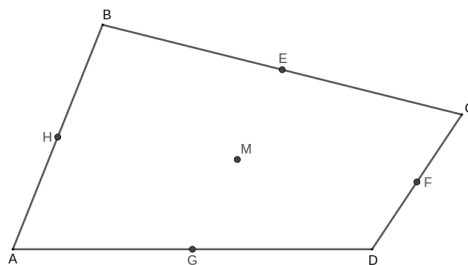
17)The end points of the diameter of a circle are (2,5), (6,7).
a)Write the co-ordinate of centre.
b)Find the radius.
c)Write the equation of circle and the diameter.

18)Write the centre and radius of following circles.
a)$x^2 +y^2 = 9$.
b) $(x-1)^2 + (y+2)^2 = 49$.
c) $x^2 + (y-3)^2 = 5$

19)Conside the circle $(x-3)^2 + (y+4)^2 = 25$.
a) Is (3,1), a point of it?
b)Write the point where it cut the X Axis.
c)Write the point where it cut the Y Axis.

20) In the above figure , the mid points of the sides of the quadrilateral are given as, G(4,4),H(2,6),E(6,8), F(8,6). A(0,0) is a vertex.
a)Find the co-ordinate of other vertices.
b) Find the mid point of GE and FH.
c) Is GHEF a parallelogram?

21) Find all those points on X axis which are at a distance 5unit from a point A(4,5).

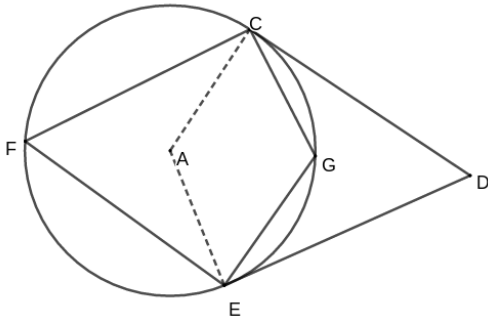22)Find a point on Y axis which are at equal distance from the points P(2,-4), Q(2,6).

23) Consider the lines 2x – 3y - 8 = 0 , 2x – 3y +4 = 0.
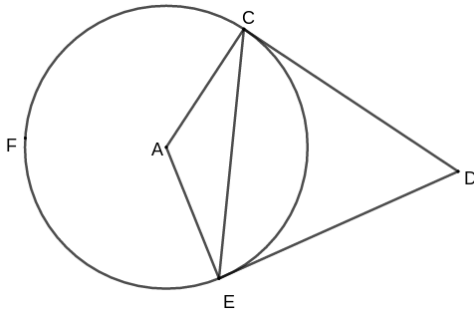a) are they parallel?
b) are the lines 3x+y-2=0 , x-3y+1 =0, perpendicular?
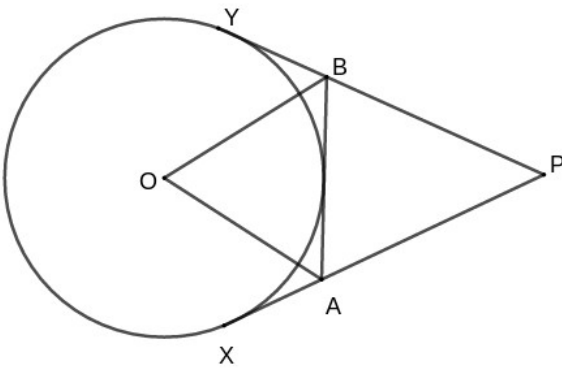c) Write the co-ordinate of their point of intersection.
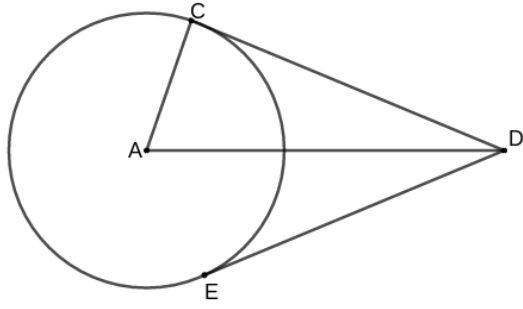
1.In figure, CD ,CE are tangents drawn from a point 13cm away from the centre of circle of radius 5cm.
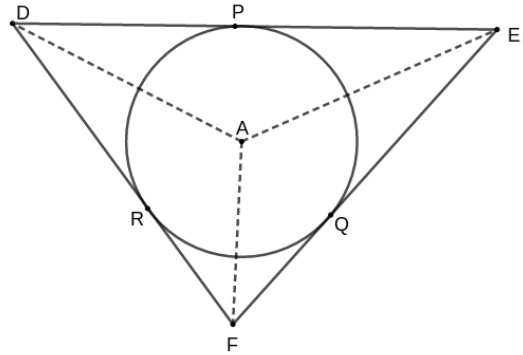a) Find CD
b)find DE

2.In above figure CD, DE are tangents. < D = 50^0 .Find
a) <CAE
b) <CFE
c) <CGE

3.In the above figure,< CFE = 100^0 .Find
a) <CAE
b) <CDE
c) Angles of triangle ACE.
d) Angles of triangle DCE.

4) In the above figure,<OBY = 50^0 ,<OAX= 60^0 .Find
a) <OBA
b) Angles of triangle OAB.
c) <PBA
d) Angles of triangle PBA.

5)In the above figure,AD = AE . <DAE = 110 , <FAE = 100, Find the measures of
a) <ADE , < AED
b) <AEF , < AFE
c) <DAF , < DFA
d) <ADF
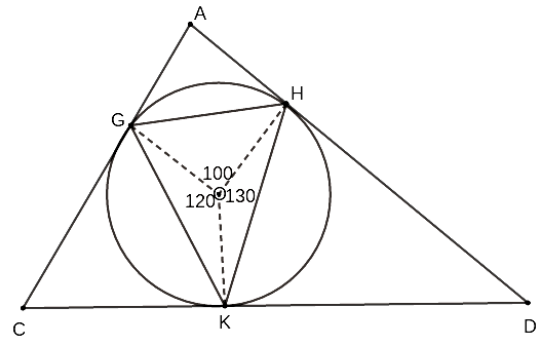
6. In the above figure, 3 central angles are given. Find
a) < HGK
b) <HDK
c)d) Angles of triangle ACD.
d)d) Angles of triangle GKH.
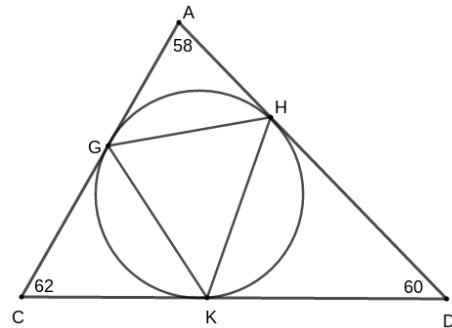
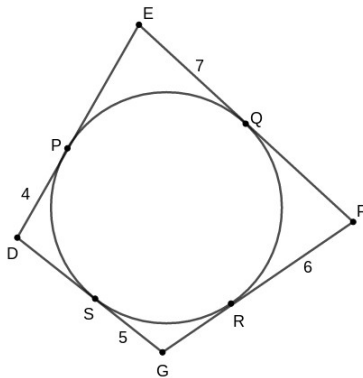7.In above figure, angles of larger triangle are given.
a)Find <HKD , < KHD
b)Find <KGH
c)Find Angles of smaller triangleGHK.
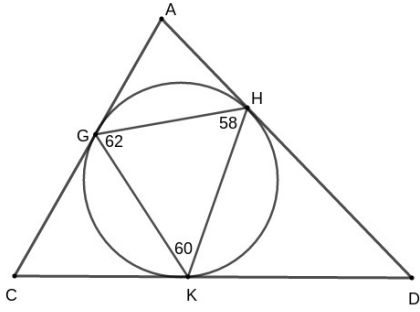
8)In figure ,angles of smaller triangle GKH are given.
a)Find <HKD ,<KHD
b)Find <HDK
c)Find Angles of larger triangle ACD.

9)In above figure a circle is inscribed in a quadrilateral.
  a) Find length of GR.
  b) Hence ,Find all other lengths and sides
  c)Comment on the sum of pairs of opposite sides.
  d)If the sides of EFGD were 6cm , 8cm , 10cm ,
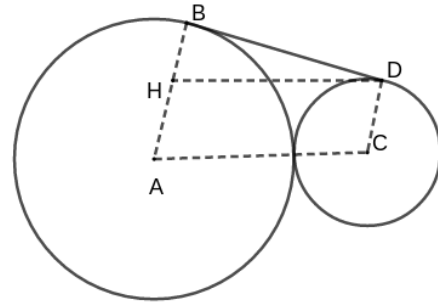7cm, Is this in-circle possible?
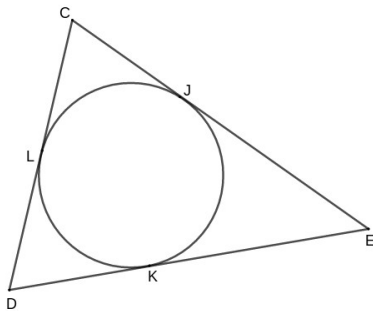
10)In above figure,CD = 8 , DE = 10 , CE = 12.
a) If DK = x , Write KE ,LD.
b) Find JE , LC , CJ.
c) Find the perimeter of the triangle.
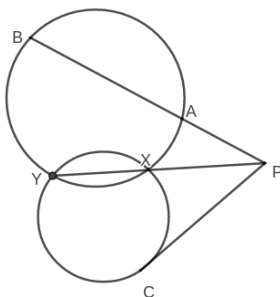
11)In the above figure,PC =12 , PX = 6 , AP = 8
a)Considering the smaller circle,Find YX.
b)Considering the larger circle,Find AB.

12)In the above figure , BD is the common tangent of
the two circles with radii 9cm , 4cm and centres A,C.
If we join AC and draw HD parallel.
a)Find the measures of < HBD , BH , HD.
b)From triangle BHD , find length of BD.

13)The sides of a triangle are 6.5cm , 7cm , 7.5cm.
a)Find area using Heron's formula.
 b) Find the radius of the in-circle.

14) The sides of a right triangle are 6cm,8cm,10cm.
a)Find the radius of circum circle.(Half of hypotenuse)
b)Find the radius of in circle.(area/semi perimeter)
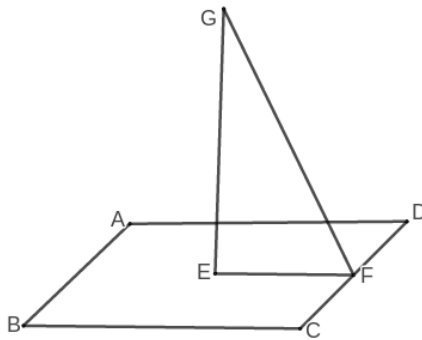
15) The sides of an equilateral triangle are a cm each.
a) Find the area.(($\sqrt{3}a^2$ /4)
b) Find the radius of in-circle (area / semiperimeter)
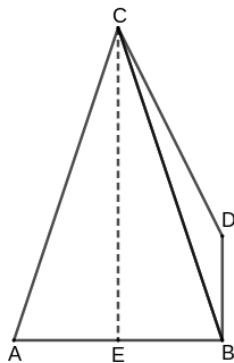c) find the radius of circum circle.(double of in-radius)

SOLIDS
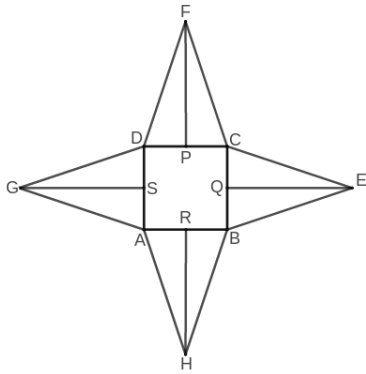
1)In the above figure, AB = 10cm , BH = 13cm
a)Give the name of the corresponding solid.
b)Write measure of base edge and lateral edge.
c)Find slant height.
d)Find height.

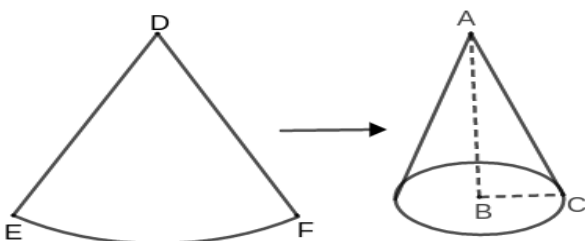2)In the above figure, GE = 15cm. GF = 17cm.
a)Find the length of base edge.
b)Find the length of lateral edge.
c)Find Volume.

3)In the above figure AB = 14cm , CB = 25cm.
a)Find slant height.
b)Find base area.
c)Find area of one lateral face.
d)Find lateral surface area.
d)Find surface area.

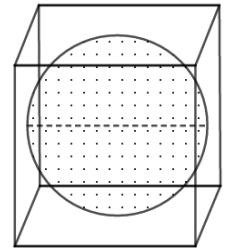4)In the above figure, < EDF = 65⁰, DF = 12cm.
a)What type of figures are fold to make cones?
b)Which part of it forms the slant height of cone?
c)Write the slant height of cone.
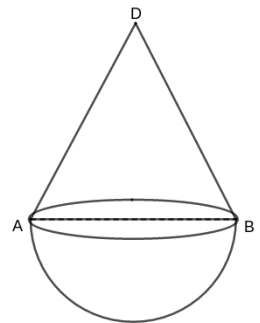d) Find the radius of the cone.
e)Find the height.
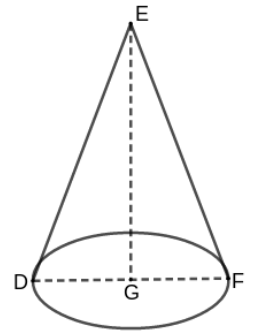
5)In the above figure, diameter is 16cm, height is 8cm.
a)Find slant height.
b)Find base area.
c)Find curved surface area.
d)Find surface area.
e)Find volume.

6)In the above figure, a solid cube of side 6cm, a sphere of maximum volume is carved out.
a)Write its diameter.
b)Find surface area.
c)Find volume.

7)The oil tank of a factory as above.
a)If curved surface area of its bottom is 72 π m^2.
 find radius
b)If curved surface area of its top is 60 π m^2.
 Find slant height.
c)Find depth of tank..
d)Find volume and capacity in litres.

Gopikrishnan.VK , GHSS Kallingalpadam
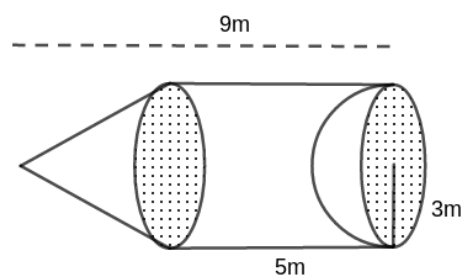
SOLIDS

8)The above figure is a solid made of cement. One side of a cylinder is attached with a cone, while a hemispherical portion is removed from the other end.
a)Write the radius and height of conical portion.
b)Find slant height.
c)Find the curved surface area of the three solids.
d)Find the cost of painting at the rate of Rs.20 per square meter.
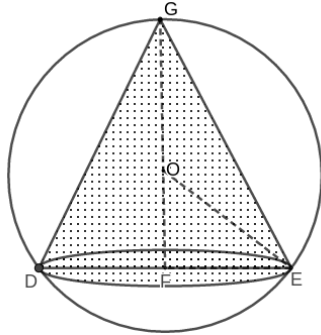
9)From a wooden sphere of radius 5cm, A cone of maximum height and radius 3cm carved out.
a)Write measures of OE and OG.
b)From triangle OFE, find OF.
c)Find volume of cone.
d) Find volume of matter remaining.

10)In above figure, a hemisphere of radius 6cm, made of vax , is melt and recast into a cone of same radius.
a)Find the volume of hemisphere.
b)Taking height as h find the volume of cone.
c)Comparing , find height of cone.

11)The base area of a square pyramid of all edges equal is12cm^2.
a)What is the shape of lateral faces?
b)What is the area of one lateral face?
c)Find lateral surface area.
c)Find length of one edge.
d)Find slant height.

12)One base edge of a square pyramid is 5cm long.
a)Find length of base diagonal.
b)If height is 6cm, find lateral edge.

13)A sphere made of wax is melt , and hemispheres of half radius is made. How many can be made?

14)The radius of a cone is made half times,and the height is made 4 times, how many is the volume?
15)A sphere has same volume and height. What will be its radius?

16)The base area and lateral surface area of a square pyramid are equal. What is the length of base edge?

16) A sphere of area 60cm^2 is cut into a hemisphere. Find the area of it.

17) If the ratio of base edges is 2:1 , ratio of heights is 1:2, find the ratio of volumes of the square pyramid.
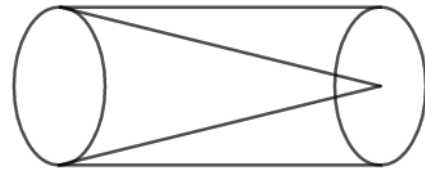
18)In the above figure the volume of a cylinder is 75cm^3 , find that of a cone of same radius and height contained in it.

19)A semicircular lamina of radius Rcm is rolled up to make a cone. Find its slant height and radius.

20)The ratio of volumes of two spheres is 8 :27. Find the ratio of areas.