SSLC Top Test Series
Mathematics

StEP

Time : 45 Mnts

Std. 10   **(Type - A)** (Chap. 1, 3)   **Score : 20**

Instructions :
- The first 7 minutes is cool - off time
- This time is to be spent for reading the questions paper
- You are not supposed to write anything during the cool - off time
- Read the instructions carefully and attempt the questions

**Answer any 3 questions from 1 to 4. Each carries 2 score.**   **(3 x 2 = 6)**

1.   The nth term of an arithmetic sequence is $x_n = 3n+4$.

 a) Write its first term.

 b) What is its common difference.

2.   The bag contains 7 red beads and 4 black beads . When we take a bead from the bag without looking.

 a) What is the probability of it being red.

 b) Find the number of black beads to be put in the bag so that the probability of getting a black bead come ½.

3.   The 15th term of an arithmetic sequence is 40.

 a. Find the sum of 14th and 16th terms

 b. Find the sum of first 29 terms.

4.   In the arithmatic sequence 6, 11, 16, ...

 a. Can the difference of any two terms of this sequence be 43. Why?

 b. Is 41, a term in this sequence ? Why?

Answer any 3 questions from 5 to 8. Each carries 3 score   **(3 x 3 = 9)**

5.   Write any two arithmetic sequences such that the sum of any number of terms from the first term became a perfect square.

6.   In the picture ABCD is a rectangle P and Q are the midpoints of the sides AD and BC. If we put a dot inside the rectangle, then what is the probability that the dot is inside the shaded part.
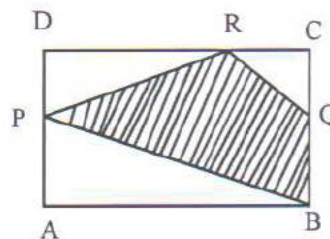
7.   In class 10A, there are 20 boys and 15 girls. In 10B, there are 15 boys and 15 girls. One student is to be selected for participating the mathematics fair from each class.

 a. What is the probability of both being boys.

 b. What is the probability of both being girls,

 c. What is the probability of one boy and one girl.

8.   Find the sum

    a. $1 + 2 + 3 + \dots + 30$

    b. $4 + 8 + 12 + \dots + 120$

    c. $6 + 10 + 14 + \dots + 122$

9.   Looking at the following number pattern.

      2

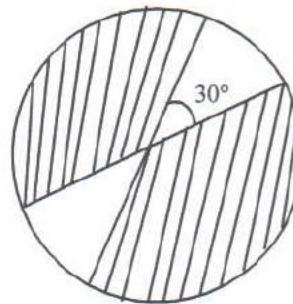   4   6

      8   10 12

    14 16 18   20

    ....

    ....

  a) Write the next line.   1

  b) How many numbers in the 10th line?   1

  c) Write the first and last numbers in the 10th line.   1

  d) Find the sum of all numbers in the 10th line.   2

Type - B

Answer 3 questions from 1 to 4. Each carries 2 score.   **(3 x 2 = 6)**

1.   Consider the arithmetic sequence.

       3, 8, 13, ...

  a) Is 100, a term in this sequence ? Why?

  b) Which is its 10th term?

2.   The common difference of an arithmetic sequence is 8 and its one term is 37. Can the sum of any 11 terms of this sequence be 2000 ? Why?

3.   One is asked to say a two digit number.

  a. What is the probability of it being a perfect square.

  b. What is the probability of it being a multiple of 5.

4.   In the picture, if we put a dot without looking, then what is the probability that the dot in inside the shaded part.

Answer any 3 questions from 5 to 8. Each carries 3 score.   **(3 x 3 = 6= 9)**

5. a) Find the sum of first 25 odd natural numbers.

  b) The sum of first 25 terms of the arithmetic sequence 5, 10, 15, ... is how much more than the sum of first 25 terms of the arithmetic sequence 4, 7, 10, ...

6.   The sum of first n terms of an arithmetic sequence is $\frac{2}{3}n^2 + \frac{1}{3}n$

   a. Find the first term and common difference

   b. Write its algebraic form.

7.   The sum of first 10 terms of an arithmatic sequence is 400and the sum of the first 5 terms is 150.

   a. Find the common difference and first term

   b. Write its algebraic form.

8.   A box contians natural numbers less than 10 and another box contains paper slips numbered 1 to 5. If we take a slip from each box

   a. Find the probability that both are odd numbers

   b. Find the probability that both are even

   c. Find the probability that atleast one is an odd numbers

9.   Look at the following number pattern.

     1

     3   5

     7   9   11

     13   15   17   19

     ....

     ....

a) Write the next line.   1

b) Write the last number in the 9th line.   2

c) Which is the first number in the 10th line.   1

d) Find the sum of all numbers in the 10th line.   1

Type - C

1.   a.   Write the sequence of counting numbers from 1 onwards..

      b.   Write the sequence obtained by adding two adjacent consecutive terms starting from 1.   **2**

2.   One is asked to say a two digit natural number.

      a.   How many two digit numbers are there?

      b.   What is the probability of numbers with equal digits?   **2**

3.   One is asked to say a two digit number.

      a.   Write perfect squares that are two digit numbers.

      b.   What is the probability of getting a perfect square?   **2**

4.   Consider the arithmetic sequence 3, 8, 13, ...

      a.   Write the algebraic form of this sequence.

      b.   Find 11th term and 26th term.   **3**

5.   Algebraic form of an arithmatic sequence is $3n + 5$.

      a.   Find first term and common difference.

      b.   Find the tenth term.   **3**

6.   One is asked to say a two digit counting number.

      a.   What is the probability of this number being odd?

      b.   What is the probability of this number being even?

      c.   What is the probability of getting a number with different digits?   **3**

7.   In an arithmetic sequence first term is 13 and common difference is 4.

      a.   Find 20th term.

      b.   Find the sum of first 20 terms.   **5**

Focus Area Based

Test - 09E

StEP

SSLC Top Test Series
Mathematics

Std. 10

(Type - A) (Chap. 2, 4)

Time : 45 Mnts

Score : 20

Instructions :
- The first 7 minutes is cool - off time
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Answer any 3 questions from 1 to 4. Each carries 2 score.   (3 x 2 = 6)

1   In the picture 'O' is the centre of the circle
    and AB is its diameter $\angle A = 70^0$.
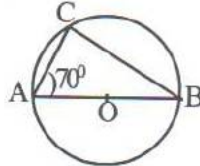
   a) Find $\angle ACB$.

   b) Write the measure of $\angle B$.

2.   Draw a circle of radius 3.5cm. Draw a triangle with two angles $50^0, 60^0$ and all its vertices are on this circle.

3.   How many consecutive natural numbers starting from 1 should be added to get 465.

4.   1 added to the product of two consecutive odd numbers gives 576. What are the numbers.

Answer any 3 questions from 5 to 8. Each carries 3 score.   (3x3=9)

5.   In the picture 'O' is the centre of the circle.
     $\angle AOB = 110^0$, $\angle OPA = 30^0$
     $\angle APB, \angle OAP, \angle OPB, \angle BOP$.
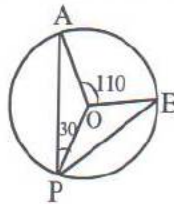
     Find $\angle APB, \angle OPA, \angle OPB$ and $\angle BOP$.

6.   Draw a rectangle with two sides 6cm and 3cm. Then draw a square of the same area.

7.   The product of a number and six more than that is 216. What are the numbers.

8.   The perimeter of a rectangle is 34cm and its diagonal is 13m. What are the lengths of its sides.

9.   AB is the diameter of the circle.
     $\angle APC = 90^0$. AP=7cm, PB=1cm
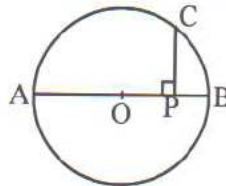
   a) What is the radius of the circle.

   b) Find the length of PC.

   c) Draw a square of perimeter $4\sqrt{7}$.

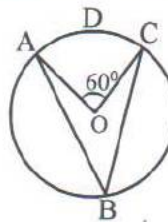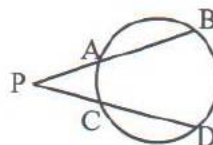   (5)

Type - B

Answer any 3 questions from 1 to 4. Each carries 2 score.   (3 x 2 = 6)

1.   In the picture 'O' is the centre of the circle.
     $\angle AOC = 60^0$.
     Find $\angle ABC$ and $\angle ADC$.

2.   In the picture, the chords AB and CD extended to
     meet at P. PA=4cm, AB=5cm, PC=3cm. Find the
     length of CD.

   *(P.T.O.)*

3.   When each side of a square was reduced by 4m, the area became 49m². What was the length of a side of the original square.

4.   9 added to the product of two consecutive multiples of 6 gives 400. What are the numbers.

**Answer any 3 questions from 5 to 8. Each carries 3 scores.**

5.   Draw a rectangle with sides 6cm, 4cm. Then drawn a square of the same area.

6.   In the picture AD = 10cm.

BD = 6cm, CD = 2cm. CQ ⊥ AD
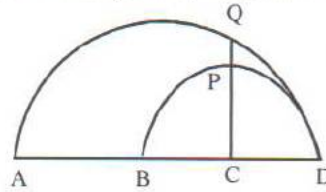
   a.   Find CP
   b.   Find the length of PQ

7.   Can you construct a rectangle of perimeter 60cm and area 230cm²? Why?

8.   The hypotenuse of a right angled triangle is 3cm more than twice its base. The third side is 7cm more than its base. Find the lengths of all sides of the right angled triangle.

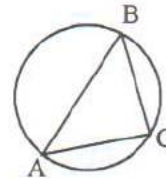9. a) In the picture, the chords AB and CD intersect at P. Prove that PA×PB=PC×PD.
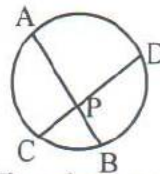
   b) Draw a rectangle with length 5cm and breadth 3cm. Then draw another rectangle of the same area with length of one side is 6cm.   **(1 x 5 = 5)**

Type - C

1.

AB is a diameter. C is a point on the circle.

   a.   Find ∠ACB.
   b.   If AC = BC find ∠A and ∠B.   2
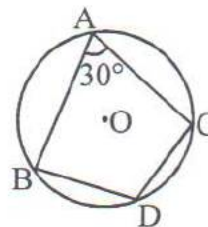
2.   Each side of a square was reduced by 1 meter. The area became 64 sq. metre. Find the length of the side of the original square.   2

3.   1 added to the product of two consecutive odd numbers gives 196. Find the numbers.   2

4.   Draw asquare of area 6 square centimetre.   3

5.

O is the center of the circle. A, B, C, D are points on the circle. ∠A = 30°
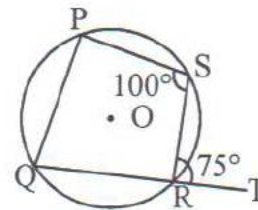
   a.   Find ∠D. Give reason.
   b.   Find the central angle of arc BDC.   3

6.   Find the solution of the equation, $x^2 + 2x = 224$ 3

7.

In the figure O is the centre of the circle. P, Q, R, S are points on the circle. Fill in the blanks and give reason for your answer.

   a.   ∠ QRS = ...
   b.   ∠ PQR = ...
   c.   ∠ QPS = ...
   d.   Central angles of the arcs QPS and QRS are ...., ...   5

Focus Area Based

SSLC Top Test Series

Mathematics

Test - 11E

Time : 45 Mnts

Score : 20

StEP

Std. 10

**(Type - A)** (Chap. 5, 8)

Instructions :
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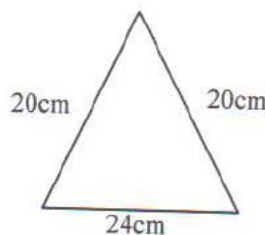
Answer any 3 questions from 1 to 4. Each carries 2 score. $(3 \times 2 = 6)$

1. In $\triangle ABC$, $\angle A = 60^0$, BC = 12 cm. Find the circumradius of this triangle.

2. In the picture ABCD is a parallelogram.
    AB = 12cm, BC = 6cm. $\angle B = 135^0$.
    Find its area.
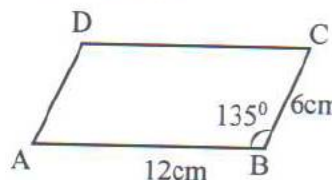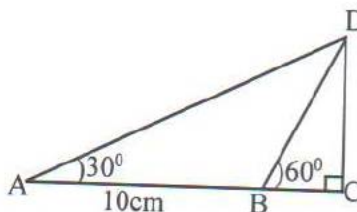
3. The base radius of a cone is 8cm and its curved surface area is $136\pi cm^2$.
    a. Find its slant height.
    b. What is its height?

4. If we make a square pyramid with the lateral faces are as shown. Then what would be its height.

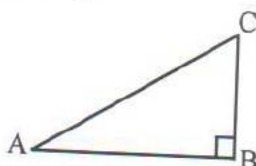**Answer any 3 questions from 5 to 8. Each carries 3 score** $(3 \times 3 = 9)$

5.

   In the picture AB = 10cm. $\angle C = 90^0$,
   $\angle CBD = 60^0$, $\angle A = 30^0$. Find the lengths
   of the sides of $\triangle BCD$.

6. When the sun is at an elevation of 60°, the length of the shadow of a tree is 12m. What would be the length of the shadow, when the sun is at an elevation of 30°.

7. The base radius of a cylindrical block of wood is 12cm and its height is 30cm. What is the volume of the largest cone that can be carved out from this?

8. A metal sphere of radius 6cm is melted and recast into a cylinder of radius 5cm. Find the height of the cylinder.

9. In the picture $\angle B = 90^0$. BC = 6, Sin A = 3/5
    a) Find the length of AC.
    b) Find CoS A.
    c) What is tan A.

$(1 \times 5 = 5)$

Type - B

Answer any 3 questions from 1 to 4. Each carries 2 score.   (3 x 2 = 6)
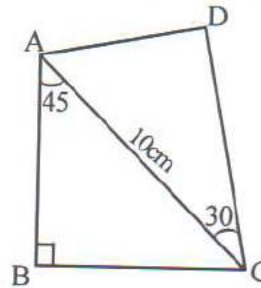
1. In triangle ABC, AB=10cm, BC=8cm, $\angle A=60^0$. Find the area of this triangle.

2. In a quadrilateral ABCD, AC=10cm,
   $\angle BAC=45^0$, $\angle ACD=30^0$.
   $\angle B=\angle D=90^0$.
   Find the perimeter of the quadrilateral ABCD.

3. A square pyramid of base edge 14cm and height 24cm is to be made by folding a piece of paper. Find the base and height of the four isosceles triangles used for making it.

4. What is the central angle of the sector needed to make a cone of base radius 8cm and slant height 32cm.

Answer any 3 questions from 5 to 8. Each carries 3 scores.   (3 x 3 = 9)

5. The larger diagonal of a rhombus is 8cm and its one angle is 60^0. Find its area.

6. The angles of elevations of two men see the top of a tower standing opposite sides at distances 4m and 9m are complementary. Prove that the height of the tower is 6m.

7. The ratio of the base radii of two cones is 2 : 3 and their height are in the ratio 3 : 4. What is the ratio of their volumes.

8. Calculate the volume of the biggest sphere carved from a cone of base diameter and slant height 18cm each.

9. The diameter of two spheres are in the ratio 2:3.
   a) What is the ratio of their radii.
   b) Write the ratio of their total surface areas.
   c) Find the ratio of their volumes.   (1 x 5 = 5)

Type - C

1. In triangle ABC, $\angle B = 90°$, Sin A = Cos A then find the measures of $\angle$ A and $\angle$ C.   2

2. In a cone base radius is 5cm and slant height is 13cm. Find its height and volume.   2

3. From a circle of radius 18cm, a sector with central angle 60° is cut out to make a cone. Find slant height and base radius of the cone.   2

4. In triangle ABC, AB = 12cm, AC = 10cm and $\angle A=45°$.
   a. Draw an approximate figure.
   b. Find perpendicular distance from C to AB.
   c. Find the area of the triangle.   3

5. Length of the diagonal of a rectangle is 14cm. This diagonal makes 30° angle with one side of the rectagle. Find the perimeter and area of the rectangle.   3

6. A tent is to be made with height 12 meter and base diameter 10 metre. Find the area of the canvas required to make the tent.   3

7. A boy is standing in between two buildings with equal heights. Buildings and the boy are on the same line. Boy is observing top of the building of 45° and 30° angle of elevation. Distance from the boy to the nearest building is 2cm.
   a. Draw an approximate picture.
   b. Find the height of the buildings and distance between them.   5

SSLC Top Test Series
Mathematics

**Std. 10**   **(Type - A)** (Chap. 6, 9)   Time : 45 Mnts
Score : 20

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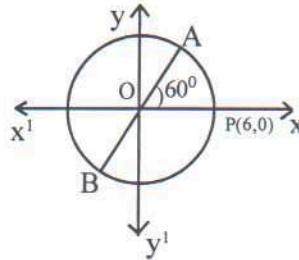- Read the instructions carefully and attempt the questions

Answer any 3 questions from 1 to 4. Each carries 2 score.   **(3 x 2 = 6)**

1. In the picture OPQR is a parallelogram.
    P(4, 0), R (1, 3). Write the coordinates of Q.
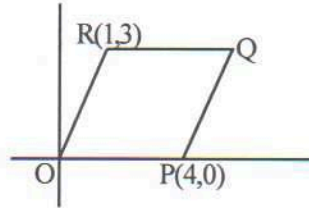
2. AB is the diameter of the circle with centre
    as the origin. $\angle AOP = 60^0$, P(6, 0).
    Find the coordinates of A and B.

3. The equation of a circle is $(x+2)^2 + (y-3)^2 = 5$. Write the co-ordinates of its centre and also write its radius.

4. Prove that the point (1, 3) (3, 6) and (7, 12) lie on the same line.

Answer any 3 questions from 5 to 8. Each carries 3 scores.   **(3 x 3 = 9)**

5. Prove that the triangle formed by joining the point (8, 2), (5, -3), (0, 0) is an isosceles triangle.

6. The centre of a circle is (1, 2) and a point on its is (3, 2). Find the coordinates of the other end of the diameter through this point.

7. The coordinates of the vertices of a quadrilateral taken in order are (2, 1), (5, 3), (8, 7) and (4, 9). Find the coordinates of the midpoints of all four sides.

8. Find the co-ordinates of three other points on the line through (-2, 3) and (1, 7)

9. The equation of a line is 2x-3y+6=0.

    a) Find the coordinates of the points of intersection of this line with the coordinate axes.

   b) What is the slope of this line.   **(1 x5 = 5)**

Type - B

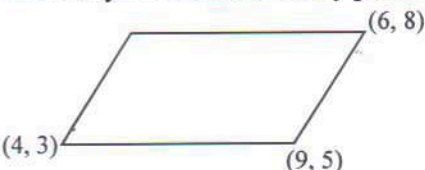**Answer 3 questions from 1 to 4. Each carries 2 score.**   **(3 x 2 = 6)**

1. The coordinates of the opposite vertices of a rectangle are (2, 6) and (8, 9). If the sides of this rectangle are parallel to the axes, then find the coordinates of the other two vertices.

2. The coordinates of the vertices of triangle ABC are A(2, 6), B(6, 8), C(4, 10). Find the coordinates of the midpoints of the sides AB, BC and AC.

3.   In the picture, one side of the equilateral triangle is 8 unit. Find the co-ordinates of all the three vertices of the triangle.
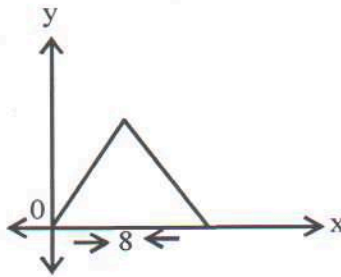
4.   Write the equation of the circle with centre $(2, 3)$ and radius 4 unit.

Answer any 3 questions from 5 to 8. Each carries 3 scores. $(3 \times 3 = 9)$

5.   Prove that the points $(2, 3)$, $(4, 6)$ and $(8, 12)$ are on the same lines.

6. $(2, 3)$ and $(5, 9)$ are two points on a line.
   a. Find the slope of the line
   b. Write the coordinates of other two points on this line.

7.   The end points of the diameter of a circle are $(-6, 0)$ and $(6, 0)$
   a. Write the coordinates of the centre of the circle
   b. What is the equation of this circle.

8.   The co-ordinates of the vertices of a quadrilateral are $(3, 2)$, $(5, 4)$, $(7, 6)$ and $(1, 8)$ in order.
   a. Find the co-ordiantes of the midpoints of all its sides.
   b. Prove that the quadrilateral got by joining these mid points is a parallelogram.

9.   The equations of two lines are $2x+y-6=0$ and $2x+y+4 =0$
   a) Write the coordinates of any two points on each of these lines.
   b) Prove that these lines are parallel. $(1 \times 5 = 5)$

Type - C

1. a. Find the x co-rdinate of any point on a line passing through $(5, 0)$ and parallel to y axis.
   b. Find the y co-ordinate of any point on a line passing through $(0, 4)$ and parallel to x axis.   **2**

2.

      Find the co-ordinates of the fouth vertex of the given parallelogram.   **2**

3. a. What is the speciality of a line joining the points $(1, 3)$, $(7, 3)$.
   b. Give the co-ordinate of another point on this line.   **2**

4.   There is a line joining the points $(2, 3)$, $10, 9)$
   a. Find the mid point of this line.
   b. Find the radius of the circle with this line as diameter.   **3**

5.   Check if the points $A(1, -1)$, $B (5, 2)$, $C (9, 5)$ lie on the same line.   **3**

6. a. Draw x axis and y axis then mark the point $(3, 0)$.
   b. Draw an isosceles triangle with one vertex as this point.   **3**

7. $A(1, 1)$, $B(5, 1)$, $C(7, 8)$, $D(3, 8)$ are vertices of a quadrilateral.
   a. Find the length of the sides AB, BC, CD and AD.
   b. Check if the opposite sides equal in length.   **5**

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- Read the instructions carefully and attempt the questions

Answer any 3 questions from 1 to 4. Each carries 2 score.   **(3 x 2 = 6)**

1. The area and perimeter of a triangle are $60cm^2$ and 40cm respectively. What is its inradius.

2. In the picture PA and PB are tangents to the circle $\angle PAB=50^0$. Find $\angle ACB$ and $\angle APB$.
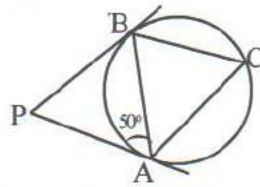
3. Draw a circle of radius 3cm. Then mark a point P at a distance 7cm from the centre. Draw tangents from P and measure their lengths.

4. The lengths of the perpendicular sides of a right triangle are 6cm and 8cm.
   a. Find the area of the triangle
    b. Find its inradius

Answer any 3 questions from 5 to 8. Each carries 3 scores.   **(3 x 3 = 9)**

5. In the picture, the sides of the triangle are tangents to the circle. AB=4cm. AC=6cm, BC=8cm. Find the length of BD.
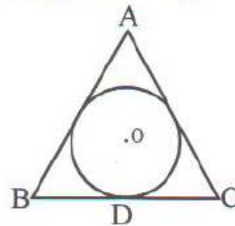
6. Draw a circle of radius 3cm. Then draw the chord AB of length 4cm. Draw tangents through A and B.

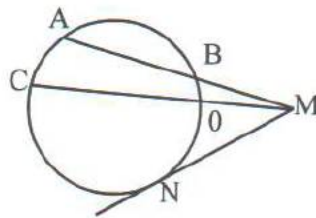7. In the picture, all the sides of the quadrilateral ABCD are tangents to the circle. Prove that AB + CD = AD + BC
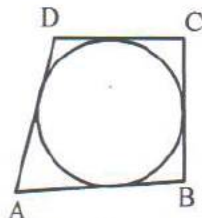
8. In the picture, three circles are drawn. PA and PB are tangents. Prove that PA = PB
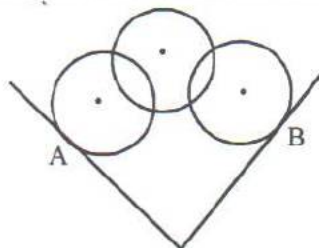
9.   In the figure, MN=12cm, MD=8cm, MB=9cm.

a) What is equal to MA×MB.

b) Find the length of CD and AB.   (1 x 5 = 5)
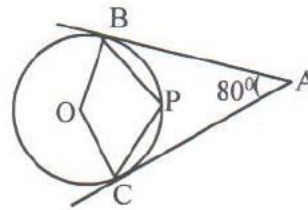
Type - B

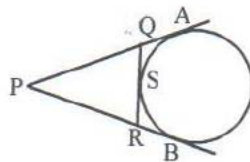**Answer any 3 questions from 1 to 4. Each carries 2 score.**   **(3 x 2 = 6)**

1.   'O' is the centre of the circle. AB and AC are
tangents to this circle. $\angle BAC=80^0$. Find
$\angle BOC$ and $\angle BPC$.

2.   Draw a circle of radius 2.5cm. Then draw a triangle with two angles 40^0 and 70^0 with all its sides are
tangents to this circle.

3.   In the picture BC is the diameter and PC is a tangent to the circle with centre 'O'. AC = 4cm and
$\angle ACP = 45°$
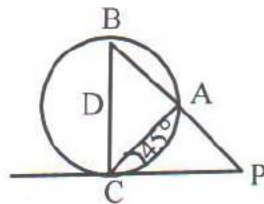
a. Find $\angle B$ and $\angle P$

b. Find PC and PB

4.   PA, PB and QR are tangents to the circle. Prove that the length of the tangent PA is half the perimeter of
$\triangle PQR$

Answer any 3 questions from 5 to 8. Each carries 3 scores.   **(3 x 3 = 9)**

5.   In triangle ABC, AB=7cm, BC=6cm, $\angle B=50^0$. Draw the triangle and construct its incirlce and measure its
radius.

6.   In the picture, the sides of $\triangle ABC$ are tangents to the circle. $\angle P = 60°$, $\angle Q = 70°$. Find the angles of $\triangle ABC$
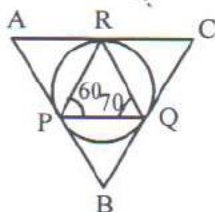
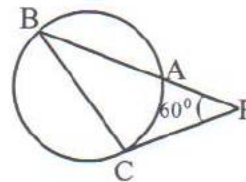7.   In the figure, the incircle of a triangle is drawn with centre 'O'. Calculate ∠AOC.
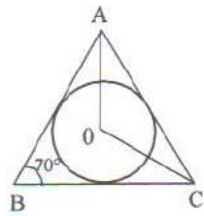
8.   In the picture ΔABC is an isosceles through AB = AC. The tangent AC meet at D on the circle and it is the midpoint of AC. Circle meet at P on the side AB. Prove that AB = 4 x AP.
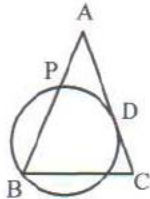
9.   In the picture PC is a tangent PA=16cm, AB=9cm

    a) Find PC.

    b) Find the area of a triangle PCB.

Type - C

1.
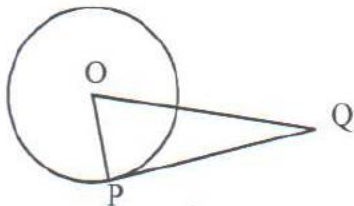
        O is the centre of the circle and PQ is a tangent.

    a.   ∠OPQ = ...

    b.   If ∠POQ = 54 then ∠Q = ...   **2**

2.
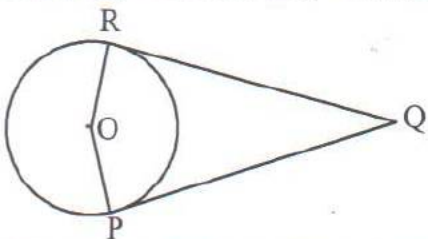
        QP, QR are tangents to the circle with centre O.

    a.   Find the measure of ∠P and ∠R.

    b.   If ∠ROP = 130° then find ∠Q.   **2**

3.
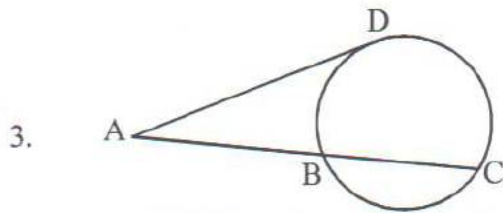
BC is a chord and AD is a tangent to the circle AB = 4cm, AC = 16cm. Find the length of AD.   **2**

4.
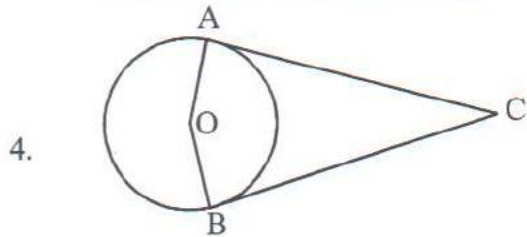
O is the centre of the circle, OA, OB are radius and CA, CB are tangents. Radius = 12cm, ∠ AOB = 120° then find CA and CB.   **3**

5.
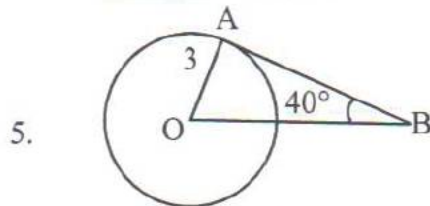
O is the centre and AB is a tangent to the circle. Explain the method of construction of this figure using the given measures.   **3**

6.   Draw a triangle with any measures and construct incircle of this triangle.   **3**

7.   Draw a circle with radius 3cm. Mark a point 7cm away from its centre. Construct tangents to the circle from this point.   **5**

StEP

SSLC Top Test Series
Mathematics

Std. 10   **(Type - A)** (Chap. 10, 11)

Time : 45 Mnts
Score : 20

Instructions :
- The first 7 minutes is cool - off time
- This time is to be spent for reading the questions paper
- You are not supposed to write anything during the cool - off time
- Read the instructions carefully and attempt the questions

Answer 3 questions from 1 to 4. Each carries 2 score.   **(3 x 2 = 6)**

1.   Write the second degree polynomial x^2-16 as the product of two first degree polynomials.

2.   (x-2) is a factor of the polynomial x^2+kx+6, then which number is K?

3.   Scores got by some students in an examination are given below. Find the median of the scores.
     48, 32, 37, 24, 62, 13, 65, 74, 71, 54

4.   Check whether x-3 is a factor of the polynomial $P(x) = x^3 - 5x^2 + 3x - 1$

Answer any 3 questions from 5 to 8. Each carries 3 scores.   **(3 x 3 = 9)**

5.   Write x^2-3x+2 as the product two first degree polynomials.

6.   If (x^2-1) is a factor of the polynomial $ax^3 + bx^2 + cx + d$, then prove that $a + c = b + d = 0$

7.   The following table gives the monthly income of 35 families. Find the median monthly income

Monthly income (Rs)	Number of families
4000	2
5000	2
6000	3
7000	5
8000	7
9000	6
1000	6
11000	4

8.   The table below classifies the height of students in a class. Find the median of the height.

Height (cm)	Number of students
135 - 140	7
140-145	8
145 - 150	10
150 - 155	11
155 - 160	5
160-165	4

9. a) If (x+1) is a factor of the second degree polynomial ax^2+bx+c, then prove that b=a+c.

   b) Write a second degree polynomial with (x+1) as a factor.   **(1 x 5 = 5)**

Type - B

Answer 3 questions from 1 to 4. Each carries 2 score.   **(3 x 2 = 6)**

1.   Write x^2-5 as the product of two first degree polynomials.

2.   If (x-1) is a factor of the polynomial ax^2+bx+c, then what is the relation between a, b and c.

3.   For different values of x prove that -1 is the least value of the polynomial $P(x) = x^2 + 6x + 8$

4.   The height of some students in a class are given in centimetres. Find the median heights.
     165, 159, 146, 153, 147, 145, 136, 158, 163, 151

Answer any 3 questions from 5 to 8. Each carries 3 scores.   (3 x 3 = 9)

5. Prove that the second degree polynomial x^2+x+1 cannot be expressed as the product of two first degree polynomials.

6. In the polynomial $P(x) = x^n - 1$
   a. If n is an even number then prove that $(x+1)$ is a factor of $P(x)$
   b. If n is any natural number then prove that $(x-1)$ is a factor of $P(x)$.

7. The following table gives the number of workers doing various jobs in a company and their daily wages. Find the median daily wage.

Daily wage (Rs)	Number of workers
600	2
700	4
800	5
900	7
1000	5
1100	4
1200	3

8. The following table gives the scores got by some students in a class. Find the median score

Score	Number of students
0-10	4
10-20	12
20-30	10
30-40	9
40-50	6

9. a) Write the second degree polynomial $P(x)=x^2+12x-13$ as the product of two first degree polynomials.
   b) Which are the solutions of the equation $P(x)=0$.   (1 x 5 = 5)

Type - C

1. In the polynomial $p(x) = x^2 - 3x + 2$, find $p(1)$ and $p(-1)$.   2

2. Wages of 5 employees are 106, 117, 107, 121, 109. If the total amount is distributed equally among them. How much will one get?   2

3. Height of eight students are given in centimetres. 135, 120, 148, 153, 124, 122, 150, 147. Find the median height.   2

4. Write the polynomial $p(x) = x^2 - 7x + 12$ as the product of two first degree polynomials. Find also the solution of the equation $p(x) = 0$ 3

5. Daily wage of some workers are given. Find the median wage

Wage :	450	500	540	600	700	800
No. of employees :	4	7	9	5	3	2

3

6. $p(x) = 2x^2 + x - 4$ is a polynomial.
   a. Find $p(-2)$
   b. Check if $(x + 2)$ is a factor of $p(x) - p(-2)$.   3

7. Table of income of some families are given. Find the median income.   5

Income :	200-300	300-400	400-500	500-600	600-700	700-800
No. of families :	3	7	10	8	4	3