

**APEEJAY SCHOOL, SHEIKH SARAI**  
**FIRST TERM EXAMINATION, 2019-20**

SS-26

**CLASS-X**  
**MATHEMATICS**

*Time allowed : 3 Hrs.*

**M.M. : 80**

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**General Instructions :**

- (i) *All questions are compulsory.*
  - (ii) *The question paper consists of 40 questions divided into four sections, A, B, C and D. Section A contains 20 questions of 1 mark each. Section B contains 6 questions of 2 marks each. Section C contains 8 questions of 3 marks each and Section D contains 6 questions of 4 marks each.*
  - (iii) *Use of calculators is not permitted.*
  - (iv) *Diagram is compulsory for all questions of geometry.*
  - (v) *All calculations to be done in a rough column on the right side of the page.*
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**(SECTION-A)**

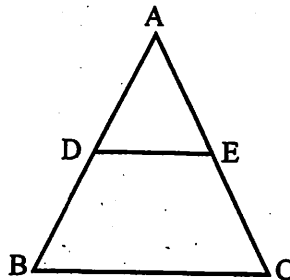
1. The decimal expansion of  $14587/1250$  will terminate after ..... decimal places.
2. The HCF of two numbers whose product and LCM are both 3691 is .....
3. Mean of four observations is 12. If first, second, third and fourth observations are decreased by 1, 2, 3 and 4 respectively, then find the new mean.
4. Two lines are given to be coincident. One of the lines is  $5x + 4y = 12$ . Find the equation of the second line.
5. If  $p(x) = ax + b$ , then zero of  $p(x)$  is .....
6. Write the quadratic formula whose sum of zeroes is 3 and product of zeroes is  $-2$ .
7. For what value of  $k$ , will the graphs of equations  $2x + 3y + 5 = 0$  and  $kx + 4y - 10 = 0$  intersect ?
8. Which of the following is one of the solutions of the equation  $x^2 - 6x + 5 = 0$  ?  
(a) 2                      (b) 5                      (c) 9                      (d) 15
9. The sum of the A.P. 2, 7, 12, ..... to 10 terms is .....
10. Write down the nature of roots of  $x^2 + x + 1 = 0$ .
11. Find the common difference of the A.P. whose 3<sup>rd</sup> term and 7<sup>th</sup> term are 12 and 24 respectively.

P.T.O.

12. In  $\triangle ABC$ ,  $AB = 6\sqrt{3}$  cm,  $AC = 12$  cm and  $BC = 6$  cm. The measurement of  $\angle B = \dots\dots\dots$
13. If in  $\triangle ABC$ ,  $PQ \parallel BC$  where P and Q are points on AB and AC respectively and  $AP = x$  cm,  $PB = 10$  cm,  $AQ = (x - 2)$  cm,  $QC = 6$  cm, then the value of  $x$  is  $\dots\dots\dots$
14. Two concentric circles are of radii 13 cm and 5 cm. The length of the chord of larger circle which touches the smaller circle is  $\dots\dots\dots$
15. What is the distance between two parallel tangents of a circle of radius 7 cm ?
16. Find area ( $\triangle ABC$ )/area ( $\triangle PQR$ ), if  $\triangle ABC \sim \triangle PQR$  and  $AB/PQ = 1/3$ .
17. If angle between two radii of a circle is  $130^\circ$ , the angle between the tangents at the ends of the radii is  $\dots\dots\dots$
18. Write the relationship between the three measures of central tendency.
19. What is the probability of getting atleast one head when a coin is tossed two times ?
20. The set of all outcomes of a random experiment is called  $\dots\dots\dots$

**(SECTION : B)**

21. Prove that  $5\sqrt{3}$  is an irrational number.
22. In the figure,  $\frac{AD}{DB} = \frac{AE}{EC}$  and  $\angle ADE = \angle ACB$ .



Prove that ABC is an isosceles triangle.

23. Find the H.C.F. of 225 and 15625 using Euclid's division algorithm.
24. For what value of  $k$  will the following pair of linear equations have no solution :  
 $2x + 3y = 1$   
 $(k - 1)x + (2k + 1)y = (k - 1)$
25. An integer is chosen at random between 1-100. Find the probability that it is not divisible by 8.
26. If the zeroes of the polynomial  $x^2 + px + q$  are double in value to the zeroes of  $x^2 - 5x + 6$ , find the values of  $p$  and  $q$ .

(SECTION : C)

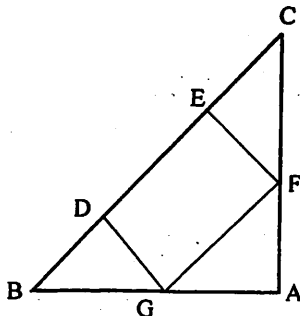
27. A fast train takes 3 hours less than a slow train for a journey of 600km. If the speed of the slow train is 10km/hr less than that of the fast train find the speed of the two trains.
28. The sum of  $n$  terms of two A.P.s are in the ratio  $5n + 4 : 9n + 6$ . Find the ratio of their 25<sup>th</sup> terms.
29. Divide the polynomial  $p(x) = 2x^4 - 4x^3 - 4x^2 + 6x - 2$  by  $g(x) = x^2 - 2$  and find the quotient and the remainder.
30. In equilateral  $\Delta ABC$ ,  $AD \perp BC$ . Prove that :  $3BC^2 = 4AD^2$ .
31. Solve for  $x$  :  $p^2x^2 + (p^2 - q^2)x - q^2 = 0$ .
32. If the median of the distribution given below is 28.5, find the values of  $x$  and  $y$ , if the total frequency is 60 :

Class Interval	Frequency
0-10	5
10-20	$x$
20-30	20
30-40	15
40-50	$y$
50-60	5
Total	60

33. Prove that the parallelogram circumscribing a circle is a rhombus.
34. Draw a pair of tangents to a circle of radius 4 cm which are inclined to each other at an angle of  $45^\circ$ .

(SECTION : D)

35. In the given figure, DEFG is a square and  $\angle BAC = 90^\circ$ . Show that  $DE^2 = BD \times EC$ .



36. A group consists of honest and extremely kind people. If 8 honest people and 12 extremely kind people can finish a piece of work in 10 days, while 6 honest and 8 extremely kind people can finish it in 14 days, then find the time taken by one honest person alone and that by one extremely kind person alone to finish the work.
37. The following distribution gives the state-wise teacher-student ratio in Senior Secondary schools of India. Find the median teacher-student ratio graphically.

No. of stds/ teacher	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60	60-65
Number of states	1	3	2	6	10	5	1	2	3	2

38. A three digit number is chosen at random. Find the probability that all three digits are not same.
39. Construct a triangle ABC in which  $AB = 5$  cm,  $BC = 8$  cm,  $AC = 6$  cm. Construct another triangle similar to triangle ABC such that its sides are  $\frac{3}{4}$  of the corresponding sides of triangle ABC.
40. If  $S_n$  denotes the sum of first  $n$  terms of an A.P., prove that  $S_{12} = 3(S_8 - S_4)$ .

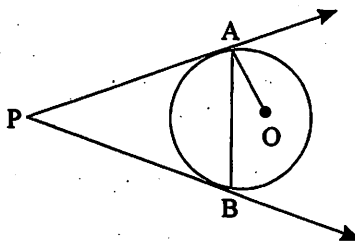
Time allowed : 3 hrs.

Maximum Marks : 80

**General Instructions :**

1. All questions are compulsory. However, internal choice has been provided between questions where the candidate should attempt any one.
2. Question numbers 1 to 20 carry 1 mark each.  
Question numbers 21 to 26 carry 2 marks each.  
Question numbers 27 to 34 carry 3 marks each.  
Question numbers 35 to 40 carry 4 marks each.
3. Draw neat diagrams wherever required.
4. Use of calculators is not permitted.

1. In the figure  $PA$  and  $PB$  are tangents to the circle with centre  $O$ . If  $\angle APB = 60^\circ$ , then  $\angle OAB$  is \_\_\_\_\_.



2. If the system of equations  $2x - 3y = 3$  and  $-4x + qy = p/2$  is inconsistent, which of the following cannot be the value of  $p$ ?
 

(a) -24	(b) -18
(c) -12	(d) -36
3. Which of the following equations has no real roots?
 

(a) $x^2 - 4x + 3\sqrt{2} = 0$	(b) $x^2 + 4x - 3\sqrt{2} = 0$
(c) $x^2 - 4x - 3\sqrt{2} = 0$	(d) $3x^2 + 4\sqrt{3}x + 4 = 0$

4. Find the 15th term of the arithmetic progression 10, 4, -2, .....
5. If  $\sin 3\theta = \cos(\theta - 6^\circ)$ , where  $3\theta$  and  $(\theta - 6^\circ)$  are acute angles, then find the value of  $\theta$ .
6. Write a quadratic equation whose sum and product of roots are  $1/2$  and  $-1/2$  respectively.
7. Find the distance between the points  $(-8/5, 2)$  and  $(2/5, 2)$ .
8. The HCF of two numbers is 145 and their LCM is 2175. If one number is 725, then the other number is
 

(a) 435	(b) 250
(c) 500	(d) 125

OR.

For some integer  $m$ , every even integer is of the form

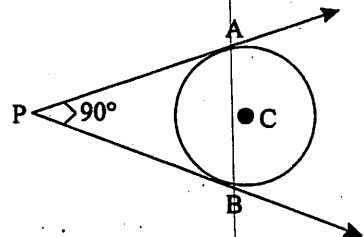
- |          |            |
|----------|------------|
| (a) $m$  | (b) $m+1$  |
| (c) $2m$ | (d) $2m+1$ |
9. In  $\triangle ABC$ ,  $AB = 6\sqrt{3}$  cm,  $AC = 12$  cm and  $BC = 6$  cm. The value of angle  $B$  is \_\_\_\_\_.
  10. If  $P(A)$  denotes the probability of an event  $A$ , then
 

(a) $P(A) > 0$	(b) $P(A) < 1$
(c) $0 \leq P(A) \leq 1$	(d) $-1 \leq P(A) \leq 1$
  11. If three points  $(0, 0)$ ,  $(3, \sqrt{3})$  and  $(3, k)$  form an equilateral triangle, then find the value of  $k$ .
  12. A vertical stick 12 m long casts a shadow 8 m long on the ground. At the same time a tower casts a shadow 40 m long on the ground. Determine the height of the tower.
  13. Two cubes each with 6 cm edge are joined end to end. The surface area of the resulting cuboid is :
 

(a) $460 \text{ cm}^2$	(b) $360 \text{ cm}^2$
(c) $560 \text{ cm}^2$	(d) $260 \text{ cm}^2$
  14. The area of a quadrant of a circle whose circumference is 44 cm is
 

(a) $77 \text{ cm}^2$	(b) $38.5 \text{ cm}^2$
(c) $19.24 \text{ cm}^2$	(d) $35.5 \text{ cm}^2$
  15. In the given figure,  $PA$  and  $PB$  are two tangents drawn from an external point  $P$  to a circle with centre  $C$  and radius 4 cm. If  $PA \perp PB$ , then the length of each tangent is :
 

(a) 3 cm	(b) 4 cm
(c) 5 cm	(d) 6 cm



16. Find which term of the arithmetic progression 21, 42, 63, 84, ..... is 420?
17. Find the value of  $\sin 35^\circ \sin 55^\circ - \cos 35^\circ \cos 55^\circ$ .
18. The decimal expansion of  $\frac{441}{2^2 \times 5^3 \times 7}$  is
- terminating
  - Non-terminating but repeating
  - Non-terminating non-repeating
  - Terminating after two places of decimal.
19. Given  $\triangle ABC \sim \triangle PQR$ , if  $AB/PQ = 1/3$ , then find (ar  $\triangle ABC$  / ar  $\triangle PQR$ ).
20. The centre of a circle is  $C(2, -3)$  and one end of the diameter  $AB$  is  $A(3, 5)$ . Find the coordinates of the other end  $B$ .
21. Show that  $3+5\sqrt{2}$  is an irrational number, given  $\sqrt{2}$  is an irrational number.
22. Find the common difference of an A.P. whose first term is 4, the last term is 49 and the sum of all its terms is 265.
23. A bag contains 24 balls of which  $x$  are red,  $2x$  are white and  $3x$  are blue. A ball is selected at random. What is the probability that it is not white?

OR

Two different dice are thrown together. Find the probability that the numbers obtained

- Have a sum less than 7
  - Have a product less than 16
24. If  $\cos \theta + \sin \theta = \sqrt{2} \cos \theta$ , show that  $\cos \theta - \sin \theta = \sqrt{2} \sin \theta$ .

OR

Find the value of  $\sin^2 5^\circ + \sin^2 10^\circ + \sin^2 15^\circ + \dots + \sin^2 90^\circ$ .

25. A horse is tied for grazing inside a rectangular field 70 m by 52 m and is tethered to one corner by a rope 21 m long. On how much area can it graze ?
26. Using Euclid's division algorithm, find whether the pair of numbers 847, 2160 are co-primes or not.
27. Find the ratio in which the point  $(x, 2)$  divides the line segment joining the points  $(-3, -4)$  and  $(3, 5)$ . Also, find the value of  $x$ .

OR

If the area of triangle with vertices  $(x, 3)$ ,  $(4, 4)$  and  $(3, 5)$  is 4 sq. Units, find  $x$ .

28. Prove that  $\sin \theta (1 + \tan \theta) + \cos \theta (1 + \cot \theta) = \sec \theta + \operatorname{cosec} \theta$ .
29. The area of an equilateral triangle is  $49\sqrt{3} \text{ cm}^2$ . Taking each angular point as centre, circles are drawn with radius equal to half the length of the side of the triangle. Find the area of triangle not included in the circles.
30. A hemispherical bowl of internal radius 9 cm is full of water. Its contents are emptied in a cylindrical vessel of internal radius 6 cm. Find the height of the water in the cylindrical vessel.
31. The sum of two numbers is 8 and the sum of their reciprocal is  $8/15$ . Find the number.
32. If two zeroes of the polynomial  $(x^4 - 6x^3 - 26x^2 + 138x - 35)$  are  $(2 + \sqrt{3})$  and  $(2 - \sqrt{3})$ , find the remaining zeroes.
33.  $ABC$  is a right triangle in which  $\angle C = 90^\circ$  and  $CD \perp AB$ . If  $BC = a, CA = b, AB = c$  and  $CD = p$ , then prove that :

(i)  $cp = ab$

(ii)  $1/p^2 = 1/a^2 + 1/b^2$

OR

State and prove the Pythagoras theorem. Using the theorem, prove that three times the square of one side of an equilateral triangle is equal to four times the square of one of its altitudes.

34. Solve for  $x$  and  $y$  :  $1/2(2x+3y) + 12/7(3x-2y) = 1/2, 7/(2x+3y) + 4/(3x-2y) = 2$ ; where  $2x+3y \neq 0$  and  $3x-2y \neq 0$ .

OR

Use a single graph paper and draw the graph of the following equations :

$$2y - x = 8; 5y - x = 14; y - 2x = 1$$

Obtain the vertices of the triangle so obtained.

35. A train travels at a certain average speed for a distance of 54 km and then travels a distance of 63 km at an average speed of 6 km/hr more than the first speed. If it takes 3 hours to complete the total journey, what is its original speed?
36. The angle of elevation of the top of a vertical tower from a point on the ground is  $60^\circ$ . From another point 10 m vertically above the first, its angle of elevation is  $30^\circ$ . Find the height of the tower.

OR

The angle of elevation of a cloud from a point 60 m above a lake is  $30^\circ$  and the angle of depression of the reflection of the cloud in the lake is  $60^\circ$ . Find the height of the cloud from the surface of the lake.



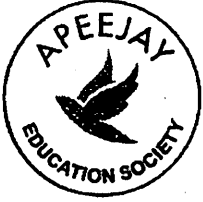
37. The mean of the following data is 65.6. Find the values of  $x$  and  $y$ .

Class Intervals	Frequency
10-30	5
30-50	8
50-70	$x$
70-90	20
90-110	$y$
130-150	2
Total	50

38. Draw a circle of radius 3 cm. From a point  $P$ , 7 cm away from its centre, draw two tangents to the circle: Measure the length of each tangent.
39. Prove that opposite sides of a quadrilateral circumscribing a circle subtend supplementary angles at the centre of the circle.
40. The following distribution gives the daily income of 50 workers of a factory :

Daily Income (in Rupees)	100-120	120-140	140-160	160-180	180-200
Number of workers	12	14	8	6	10

Convert the above distribution to a less than type cumulative frequency distribution and draw its ogive.



ROLL NO.	
NAME	
CLASS & SECTION	

APEEJAY COMMON PRE-BOARD EXAMINATION, 2019-20

04

CLASS-X  
MATHEMATICS

Time allowed : 3 hrs.

Maximum Marks : 80

**General Instructions :**

1. All questions are compulsory.
2. Section A has 20 questions of 1 mark each;  
Section B has 6 questions of 2 marks each;  
Section C has 8 questions of 3 marks each and  
Section D has 6 questions of 4 marks each.
3. Draw neat figures wherever required.
4. The paper has certain internal choices in the questions.  
You have to attempt any one of them.

SECTION-A

(20×1=20)

(QNO. 1 to 10 are MCQ's. Please write the correct option along with the answer in your answer sheet)

1. The LCM of the two numbers is 1200. Which of the following cannot be their HCF?  
(a) 200 (b) 500  
(c) 400 (d) 700
2. If  $n$  is any natural number, then  $6^n - 5^n$  always ends with  
(a) 1 (b) 3  
(c) 5 (d) 7
3. If one zero of the polynomial  $f(x) = (k^2+4)x^2 + 13x + 4k$  is reciprocal of the other, then  $k = ?$   
(a) 2 (b) -2  
(c) 1 (d) -1

P.T.O.

4. The value of  $k$  for which the system of equations  $x + 2y = 5$ ,  $3x + ky + 15 = 0$  has no solution is

- (a) 6 (b) -6  
(c)  $3/2$  (d) None of these

5. If  $x=1$  is a common root of  $ax^2 + ax + 2 = 0$  and  $x^2 + x + b = 0$  then,  $ab=?$

- (a) 1 (b) 2  
(c) 4 (d) 3

OR

If the sum and the product of the roots of the equation  $kx^2 + 6x + 4k = 0$  are equal, then  $k=?$

- (a)  $-3/2$  (b)  $3/2$   
(c)  $2/3$  (d)  $-2/3$

6. The  $n$ th term of an A.P. then the sum of whose  $n$  terms is  $S_n$ , is

- (a)  $S_n + S_{n-1}$  (b)  $S_n - S_{n-1}$   
(c)  $S_n + S_{n+1}$  (d)  $S_n - S_{n+1}$

7. If the points  $(K, 2K)$ ,  $(3K, 3K)$  and  $(3, 1)$  are collinear, then  $K$

- (a)  $1/3$  (b)  $-1/3$   
(c)  $2/3$  (d)  $-2/3$

8. Sides of two similar triangles are in ratio 4:9. Area of these triangles are in the ratio

- (a) 2:3 (b) 4:9  
(c) 81:16 (d) 16:81

9. The length of the hypotenuse of an isosceles right angled triangle whose one side is  $4\sqrt{2}$  cm is

- (a) 12 cm (b) 8 cm  
(c)  $8\sqrt{2}$  cm (d)  $12\sqrt{2}$  cm

10. If  $PT$  is tangent drawn from a point  $P$  to a circle touching it at  $T$  and  $O$  is the centre of the circle, then  $\angle OPT + \angle POT = ?$

- (a)  $30^\circ$  (b)  $60^\circ$   
(c)  $90^\circ$  (d)  $180^\circ$

(QNO. 11 to 15 are fill in the blanks. Please write the correct answer in your answer sheet)

11. The smallest rational number by which  $1/3$  should be multiplied so that its decimal expansion terminates after one place of decimal, is \_\_\_\_\_

12. The sides  $AB$ ,  $BC$ ,  $CA$  of  $\triangle ABC$ , touch a circle at  $P$ ,  $Q$  and  $R$  respectively. If  $PA=4\text{cm}$ ,  $BP=3\text{cm}$  and  $AC=11\text{cm}$ , then length of  $BC$  is \_\_\_\_\_

OR

A circle touches the side  $DF$  of  $\triangle EDF$  at  $H$  and touches  $ED$  and  $EF$  produced at  $K$  and  $M$  respectively. If  $EK=9\text{ cm}$ , then the perimeter of  $\triangle EDF$  is \_\_\_\_\_

13. The value of  $\sin^2 60^\circ + 2 \tan^2 45^\circ - \cos^2 30^\circ$  is \_\_\_\_\_
14. If  $\sin \theta = 3/5$ , then the value of  $(\tan \theta + \sec \theta)^2$  is \_\_\_\_\_
15. The probability of guessing the correct answer to a test question is  $\frac{x}{12}$ . If the probability of not guessing the correct answer is  $\frac{2}{3}$ , then  $x$  is \_\_\_\_\_.

(QNO. 16 to 20 are short answer questions. Please write the correct answer in your answer sheet)

16. Find the area of the triangle formed by the lines  $x=3$ ,  $y=4$  and  $x=y$ .
17. If 1 is the zero of the polynomial  $p(x) = ax^2 - 3(a-1)x - 1$ , then find the value of  $a$ .
18. If the angles of elevation of the top of a tower from two points distant  $a$  and  $b$  from the base and in the same straight line with it are complementary, then find the height of the tower.
19. If the radius of a circle is diminished by 10%, then by how much percent is the area diminished?
20. What is the algebraic sum of deviations of a frequency distribution about its mean?

SECTION-B

(6×2=12)

21. Find the sum of first 25 terms of an A.P. whose  $n^{\text{th}}$  term is  $1 - 4n$ .
22. In what ratio does the line  $x - y - 2 = 0$  divide the line segment joining  $(3, -1)$  and  $(8, 9)$ ?

OR

Find the value of  $k$  if the points  $A(k+1, 2k)$ ,  $B(3k, 2k+3)$  and  $C(5k-1, 5k)$  are collinear?

23. If  $5 \cot \theta = 3$ , then find the value of  $\frac{5 \sin \theta - 3 \cos \theta}{4 \sin \theta + 3 \cos \theta}$ .
24. A sphere of radius 6 cm is dropped into a cylindrical vessel partly filled with water. The radius of the vessel is 8 cm. If the sphere is submerged completely, then how much does the surface of water rise?

OR

2.2 cubic dm of metal is to be drawn into a cylindrical wire of diameter 0.50cm. Find the length of the wire obtained.

25. In a single throw of a pair of dice, what is the probability of getting a doublet?  
 26. For what values of  $k$  will the following pair of equations have infinitely many solutions :

$$\begin{aligned} 2x + 3y &= 4 \\ (k + 2)x + 6y &= 3k + 2 \end{aligned}$$

**SECTION-C**

(8×3=24)

27. Using Euclid's division algorithm, find the HCF of 42, 56 and 385.

**OR**

Given that  $\sqrt{5}$  is an irrational number, show that  $3 + 2\sqrt{5}$  is irrational.

28. Draw the graph of the following pair of linear equations :  $x + 3y = 6, 2x - 3y = 12$ . Hence find the area of the region enclosed between the  $x = 0, y = 0$  and  $2x - 3y = 12$ .

**OR**

The area of a rectangle gets reduced by 9 sq units if the length is reduced by 5 units and its breadth is increased by 3 units. If we increase the length by 3 units and breadth by 2 units, the area is increased by 67 sq units. Find the length and breadth of the rectangle.

29. Find a point on y-axis which is equidistant from (6, 5) and (-4, 3).  
 30. Prove that the sum of either pair of opposite angles of a cyclic quadrilateral is  $180^\circ$ .  
 31. Prove that :  $(1 + \cot \theta - \operatorname{cosec} \theta) (1 + \tan \theta + \sec \theta) = 2$

**OR**

Prove that :  $\tan 7^\circ \tan 23^\circ \tan 60^\circ \tan 67^\circ \tan 83^\circ = \sqrt{3}$ .

32. A cylindrical container of radius 6cm and height 15cm is filled with ice cream. The whole ice cream has to be distributed to 10 children in equal cones with hemispherical tops. If the height of the conical portion is 4 times the radius of its base, find the radius of the ice cream cone.  
 33. Compute the mean for the following data :

Marks obtained Less than	10	20	30	40	50	60
Number of Students	14	22	37	58	67	75

34. Solve the following system of equations for  $x$  and  $y$  :

$$\begin{aligned} ax + by - a + b &= 0 \\ bx - ay - a - b &= 0 \end{aligned}$$

**SECTION-D**

(6×4=24)

35. The age of a man is twice the square of the age of the son. Eight years hence, the age of the man will be 4 years more than three times the age of his son. Find their present ages.

**OR**

Find the sum of all natural numbers lying between 100 and 500, which are divisible by 8.

36. State and prove the Basic Proportionality Theorem
37. From a solid cylinder whose height is 12 cm and diameter 10 cm, a conical cavity of same height and same diameter is hollowed out. Find the volume and the total surface area of the remaining solid.

**OR**

The inner diameter of a glass is 7 cm and it has a raised portion in the bottom in the shape of a hemisphere. If the height of the glass is 16 cm, find the apparent capacity and the actual capacity of the glass. (Take  $\pi = 22/7$ )

38. An aeroplane at an altitude of 200 meters observes the angles of depression of opposite points on the two banks of a river to be  $45^\circ$  and  $60^\circ$ . Find the width of the river.
39. ABC is a right triangle right angled at C. If D is the midpoint of AB and  $AC = \sqrt{3}BC$ . Prove that  $\angle ABC = 60^\circ$ .

**OR**

Draw a  $\triangle ABC$  with side  $BC = 7\text{cm}$ ,  $\angle B = 45^\circ$  and  $\angle A = 105^\circ$ .

Then construct a triangle similar to  $\triangle ABC$  whose sides are  $\frac{3}{4}$  times the corresponding sides of  $\triangle ABC$ .

40. The following distribution gives the daily income of 50 workers of a factory. Convert the data into less than type cumulative distribution and draw its ogive.

Daily income (Rs.)	100-120	120-140	140-160	160-180	180-200
Number of workers	12	14	8	6	10

**BEST OF LUCK!**