Maths Assignments

Class – IX. SA-2
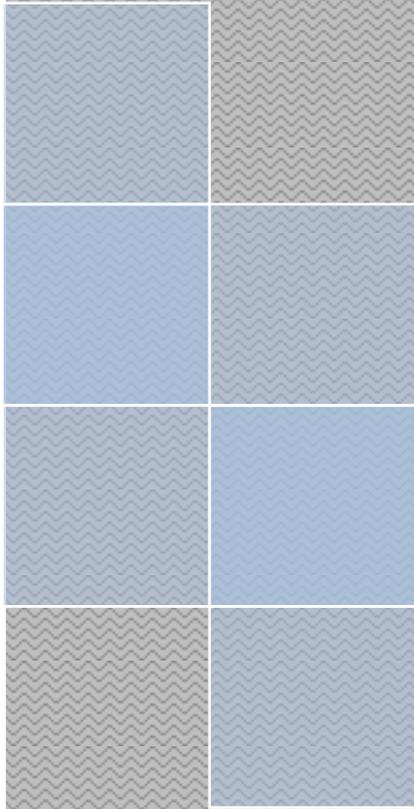
Syllabus			
SNo.	Topic(s)	Marks	Completion Date
1.	Algebra • Linear Equations in 2 variables	16	
2.	Geometry • Quadrilaterals • Area • Circles • Constructions	38	
3.	Mensuration • Surface Areas and Volumes	18	
4.	Statistics and Probability • Statistics • Probability	18	

## Assignment : IX / Maths / Linear Equations in 2 variables

1. Write the equation $x-4 = 3y$ in the form $ax + by + c = 0$ and indicate the values of a, b, and c.

2. If the point (-3,0) lies on the line $ax = 3(y+a)$, find the value of a.

3. If the point (-3,4) lies on the line $ax = 3y+a$, find the value of a.

4. Find three solutions of the equation $2x-4 = 3y$, and draw the graph of this equation.

5. Find three solutions of the equation $2x+y = 4$, and draw the graph of this equation.

6. Represent each of the following situations in the form of a linear equation:
   (i) The cost of a pen is Rs2 more than thrice the cost of a pencil.
   (ii) The speed of a car is 30km/hr more than the speed of a scooter.
   (iii) The total number of class IX students in a school is half of the total number of students in class 6 in the school.
   (iv) Twice the cost of a full ticket is Rs50 more than thrice the cost of a half ticket.
   (v) The total number of printers in a computer lab is 3 less than half the number ofcomputers in the lab.

7. (i) Write the equations of two straight line passing through (1,-2).
   (ii) Write the equations of two straight line passing through (1,0).
   (iii) Write the equations of a straight line passing through (1,-2) and parallel to x-axis.
   (iv) Write the equations of a straight line passing through (1,0) and parallel to x-axis.
   (v) Write the equations of a straight line passing through (1,-2) and parallel to y-axis.
   (vi) Write the equations of two straight lines passing through origin.
   (vii) Write the equations of x-axis and y-axis.

8. The auto fare in Delhi is as follows: For the first kilometer the fair is Rs 8 and for the subsequent distance it is Rs 3.50 per km. Taking the distance covered as x km and total fare as Rs y, write a linear equation for this information and draw its graph. Using this equation find the fare from Moti Nagar to Patel Nagar, if the distance between Moti Nagar and Patel Nagar is 5km.

9. Draw the graphs of the lines $3x-2y+6=0$ and $x+2y-6=0$ on the same graph paper. Find the area of the triangle formed by the two lines and x-axis.

10. Draw the graph of the equation $3x-4y=12$. From the graph check whether (4,2) is a solution of the equation or not.

### Assignment : IX / Maths / L.E. in 2 Variables - MCQ

1. $y=4x-3$ has
   a. Unique Solution
   b. Only two solutions
   c. No Solution
   d. Infinitely many solutions

2. If $x=-2$ and $y=3$ is a solution of the equation $3x-5y=k$, then the value of k is:
   a. 21   b. -21
   c. 9   d. -9

3. The equation of $ax+by+c = 0$, where a, b, c are non-zero real numbers, represents:
   a. A circle
   b. A straight line
   c. A triangle
   d. None of the above

4. Which of the following is an equation of a straight line passing through origin:
   a. $y = 3$
   b. $y = 4$
   c. $y = 3x$
   d. $2x+3y = 5$

5. Let four points A, B, C, D are collinear. Then joining these points in order we get:
   a. A straight line
   b. A quadrilateral
   c. A triangle
   d. None of these
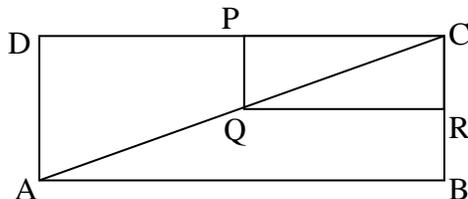
Assignment : IX / Maths / Quadrilaterals

1. Show that the diagonals of a rhombus are perpendicular to each other.
2. Show that the diagonals of a square are equal and bisect each other at right angles.
3. ABCD is a rectangle in which diagonal AC bisects $\angle A$ as well as $\angle C$. Show that diagonal BD bisects $\angle B$ as well as $\angle D$.
4. ABCD is a parallelogram and AP and CQ are perpendiculars from vertices A and C on diagonal BD. Show that
    - (i) ΔAPB and ΔCQD are congruent.
    - (ii) AP = CQ
5. In a parallelogram ABCD, E and F are the mid-points of the sides AB and CD respectively. Show that the line segments AF and EC trisect the diagonal BD.
6. ABCD is a rhombus and P, Q, R, S are the mid-points of the sides AB, BC, CD, and DA respectively. Show that the quadrilateral PQRS is a rectangle.
7. In the given figure ABCD is a parallelogram in which diagonals AC and BD intersect at O. A line segment LM is drawn passing through O. Prove that LO=OM.
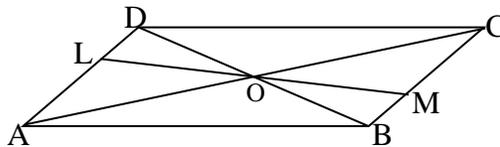
8. In the given figure, ABCD is a parallelogram and X, Y are the points on diagonal BD such that DX = BY. Prove that CXAY is a parallelogram.
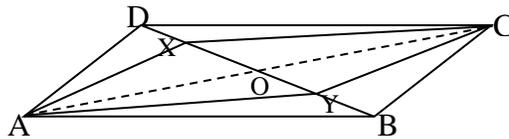
9. In the given figure, ABCD and PQRS are rectangles, where Q is the mid point of AC. Prove that (i) DP = PC, (ii) PR = ½ AC.

10. Show that the quadrilateral formed by joining the mid points of the sides of a square is a square.

Assignment : IX / Maths / Quadrilaterals - MCQ

1. In quadrilateral ABCD, AB = BC and CD = DA, then the quadrilateral is a:
   a. Parallelogram
   b. Rhombus
   c. Kite
   d. trapezium

2. In a quadrilateral 3 angles are in the ratio 3:3:1 and one of the angles is 80º, then other angles are:
   a. 120º, 120º, 40º
   b. 100º, 100º, 80º
   c. 110º, 110º, 60º
   d. None of these

3. In a quadrilateral ABCD, AB‖CD and AB=CD=7cm. If angle A = 70º, the other angles are:
   a. 70º, 110º, 110º
   b. 100º, 100º, 90º
   c. 80º, 80º, 130º
   d. 76º, 107º, 107º

4. ABCD is a parallelogram and X and Y are mid points of sides AB and CD respectively. Then the quadrilateral AXCY is a:
   a. Parallelogram
   b. Rectangle
   c. Rhombus
   d. square

5. Let four points A, B, C, D are collinear. Then joining these points in order we get:
   a. A straight line
   b. A quadrilateral
   c. A triangle
   d. None of these

6. Which of the following is not a parallelogram:
   a. Trapezium
   b. Square
   c. Rectangle
   d. rhombus

7. Which of the following statements is correct:
   a. Every trapezium is a parallelogram
   b. Every rectangle is a parallelogram
   c. Every ‖^{gm} is a rectangle
   d. Every rhombus is a square

8. A quadrilateral, whose diagonals bisect at right angles, is called
   a. A trapezium
   b. A rectangle
   c. A parallelogram with unequal adjacent sides
   d. A rhombus

9. In triangle ABC, D, E, and F are the mid-points of the sides AB, BC, CA respectively, DECF is a
   a. rectangle
   b. rhombus
   c. parallelogram
   d. square

10. In an equilateral triangle ABC, D, E, and F are the mid-points of the sides AB, BC, CA respectively, BEFD is a
    a. rectangle
    b. rhombus
    c. parallelogram
    d. square

Assignment : IX / Maths / Areas of parallelograms and triangles

1. Show that the line segment joining the mid points of a pair of opposite sides of a parallelogram divides it into two equal parallelograms.

2. The diagonals of a quadrilateral ABCD, AC and BD intersect in O. Prove that if BO=OD, then ar(ΔABC) = ar(ΔBCD).

3. In a quadrilateral ABCD, it is given that M is the mid point of AC. Prove that ar(ABCD) = ar(DMBC).

4. If the medians of a ΔABC intersect at G, show that
    ar(ΔAGB) = ar(ΔAGC) = ar(ΔBGC) = ar(ΔABC)/3.

5. If each diagonal of a quadrilateral divides it into two triangles of equal area then show that the quadrilateral is a parallelogram.

6. In a parallelogram ABCD, O is any point on the diagonal AC. Show that ar(ΔAOB) = ar(ΔAOD).

7. The vertex A of a ΔABC is joined to a point D D on the side BC. The mid point of AD is E. Prove that ar(ΔBEC) = ½ ar(ΔABC).

8. P, Q, R, S are respectively the mid points of the sides AB, BC, CD, DA of ||^{gm} ABCD. Show that (i) PQRS is a parallelogram, (ii) ar(PQRS) = ½ ar(ABCD).

9. Find the area and perimeter of a rhombus, the lengths of whose diagonals are 16cm and 24cm.

10. BD is one of the diagonals of a quadrilateral ABCD. If AL is perpendicular to BD and CM is perpendicular to BD, show that ar(ABCD) = ½ x BD x (AL + CM).

Assignment : IX / Maths / Areas of parallelograms and triangles - MCQ

1. In ABCD is a parallelogram which is not a rectangle AB=CD=*x* units and BC = AD = *y* units. Area of ABCD is:
   a. Less than *xy* sq. units
   b. More than *xy* sq. units
   c. Equal to *xy* sq. units
   d. None

2. The diagonal of a square is 8cm. Its area is:
   a. 4 sq. cm
   b. 16 sq. cm
   c. 24 sq. cm
   d. 32 sq. cm

3. The area of a rhombus is 20cm^2, if one of its diagonals is 5cm, the other diagonal is
   a. 4 cm
   b. 10 cm
   c. 16 cm
   d. 8 cm

4. A parallelogram and a rectangle are on the same base and between the same parallels, then the perimeter of the rectangle is:
   a. Less than the perimeter of the parallelogram
   b. More than the perimeter of the parallelogram
   c. Equal to the perimeter of the parallelogram
   d. None

5. The ratio of the areas of two squares is 4:9, the ratio of their perimeters in the same order is:
   a. 3:2
   b. 4:9
   c. 9:4
   d. 2:3

6. The area of a trapezium is 24cm^2. The distance between its parallel sides is 4cm. If one of the parallel sides is 7cm, the other parallel side is:
   a. 5 cm
   b. 8 cm
   c. 12 cm
   d. 7 cm

7. XYZW is a parallelogram and O is the point of intersection of its diagonals XZ and YW. If the area of ΔXOW = 8cm^2, the area of the parallelogram is:
   a. 32 sq. cm
   b. 16 sq. cm
   c. 2 sq. cm
   d. 4 sq. cm

8. A triangle and a rhombus are on the same base and between the same parallels. Then the ratio of the areas of the triangle and the rhombus is:
   a. 1:1
   b. 1:4
   c. 1:2
   d. 1:3

9. Given ar(parallelogram XYZW) = 35 cm^2, and ar(XPY) = y cm^2, then value of y is:
   a. 17.5 sq. cm
   b. 17.5 cm
   c. 35 sq. cm
   d. 47.5 sq. cm

10. In parallelogram XYZW, P is a point in its interior and its area is 28cm^2. ar(XPW) + ar(YPZ) =
   a. 28 sq. cm
   b. 32 sq. cm
   c. 14 sq. cm
   d. None of these

Assignment : IX / Maths / Circles

1. Find the length of a chord which is at a distance of 8cm from the centre of a circle of radius 17cm.

2. In the given figure, AB and CD are two parallel chords of a circle with centre O and radius 5cm such that AB = 8cm and CD = 6cm. If OP$\perp$AB and OQ$\perp$CD, determine the length of PQ.
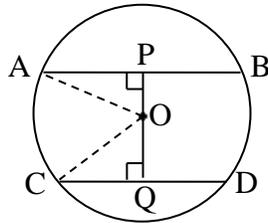
3. Two chords AB and AC of a circle are equal. Prove that the centre of the circle lies on the angle bisector of $\angle$BAC.

4. Prove that the right bisector of a chord of a circle bisects the corresponding minor arc of the circle.

5. Two circles whose centres are O and O' intersect at P. Through P, a line l parallel to OO', intersecting the circles at C and D , is drawn. Prove that CD = 2OO'.

6. If two chords of a circle are equally inclined to the diameter through their point of intersection, prove that the chords are equal.

7. A chord of length 16cm is drawn in a circle of radius 10cm. Find the distance of the chord from the centre of the circle.

8. In a circle of radius 5cm, AB and CD are two parallel chords of lengths 8cm and 6cm respectively. Calculate the distance between the chords if they are
    (i)   On the same side of the centre
    (ii) On the opposite sides of the centre.

9. Give a method to find the centre of a given circle.

10. In a circle of radius 5cm, AB and AC are two chords such that AB=AC=6cm. Find the length of the chord BC.

Assignment : IX / Maths / Circles - MCQ

1. The radius of a circle is 2.5cm. AB and CD are two parallel chords 2.7cm apart. If AB=4.8cm, then CD =
   a. 4.8cm
   b. 2.4cm
   c. 3cm
   d. 4cm

2. A $\triangle$PQR is inscribed in a circle and bisectors of its angles meet the circumference at X, Y, Z. The angles of $\triangle$XYZ are respectively
   a. 90–P/2, 90-Q/2, 90-R/2
   b. 90, 60, 30
   c. P/2, Q/2, R/2
   d. Q/2, P/2, R/2-Q/2

3. The diameter is
   a. The smallest chord of a circle
   b. Longest chord of a circle
   c. Half the radius
   d. Same as the radius

4. The least number of non-collinear points required to draw a unique circle passing through them is:
   a. 2
   b. 3
   c. 4
   d. 5

5. The circumference of a circle is 60cm. The length of an arc of central angle 90º is:
   a. 10cm
   b. 15cm
   c. 20cm
   d. None

6. A circle is divided into 12 equal parts. The central measure of each arc is:
   a. 30º
   b. 60º
   c. 45º
   d. None

7. The length of a chord of a circle is equal to the radius of the circle. The angle which this chord subtends on the major segment of the circle is:
   a. 30º
   b. 60º
   c. 45º
   d. 90º

8. Two parallel chords on the same side of the centre of a circle are 10cm and 24cm long. If these chords are 7cm apart, then radius of the circle is:
   a. 13cm
   b. 8cm
   c. 5cm
   d. 7cm

9. Two chords of a circle bisect each other. Then they must be:
   a. Diameters
   b. Tangents
   c. Secants parallel to each other
   d. None

10. 48cm long chord of a circle is at a distance of 7cm from the centre of the circle. Radius of the circle is:
    a. 5cm   b. 17cm
    c. 25cm   d. None

Assignment : IX / Maths / Constructions

1. Draw a line segment AB=5cm and draw its perpendicular bisector.

2. Draw an angle of 45° using scale and compass. Draw the bisector of this angle.

3. Draw an equilateral triangle each of whose sides measures 5cm.

4. Construct a right triangle in which one of the acute angles is 60° and the hypotenuse measures 6cm.

5. Construct a $\triangle$ABC, in which base BC = 3cm, $\angle$B = 30°, AB+AC = 5.2cm.

6. Construct a $\triangle$XYZ, in which base $\angle$Y = 30°, $\angle$Z = 90°, XY+YZ+ZX = 11cm.

7. Construct a $\triangle$PQR, in which QR = 6cm, $\angle$Q = 60°, PR-PQ = 2cm.

8. Construct a $\triangle$ABC, in which base $\angle$B = 60°, $\angle$C = 45°, AB+BC+CA = 10cm.

9. Construct a triangle with base of length 5cm. The sum of the other two sides is 7cm, and one of the base angles is 60°.

10. Construct a $\triangle$PQR such that two base angles are 45° each and the perimeter($\triangle$PQR) = 12cm.

Assignment : IX / Maths / Surface Areas and Volumes

1. Find the lateral surface area, total surface area and volume of a cube of side 20cm, if it is
   i)   Open from the top and bottom
   ii) Closed at the bottom
   iii) Closed at the top and bottom

2. Find the lateral surface area, total surface area and volume of a cuboid of dimensions 20cm x 15cm x 10cm, if it is
   i)   Open from the top and bottom
   ii) Closed at the bottom
   iii) Closed at the top and bottom

3. Find the lateral surface area, total surface area and volume of a cylinder of radius 10cm and height 12cm, if it is
   i)   Open from the top and bottom
   ii) Closed at the bottom
   iii) Closed at the top and bottom

4. Find the lateral surface area, total surface area and volume of a cone of radius 10cm and height 12cm, if it is
   i)   open at the base
   ii) Closed at the base

5. Find the lateral surface area, total surface area and volume of a sphere of radius 10cm.

6. Three equal cubes are placed adjacent to each other in a row. Find the ratio of the total surface area of the cuboid thus formed to the sum of the surface areas of the three cubes.

7. Wall paper, 312m long and 25cm wide is required to cover the walls of a room. Length of the room is 7m and its breadth is twice its height. Determine the height of the room.

8. A cubical box has each edge 10cm and another cuboidal box has dimensions 12.5cm x 10cm x 8cm.
   i)   Which box has the greater lateral surface area and by how much?
   ii) Which box has the smaller total surface area and by how much?

9. The length of a hall is 20m and width 16m. The sum of the areas of the floor and the flat roof is equal to the sum of the areas of four walls. Find the heigTht and volume of the hall.

10. The total cost of making a spherical ball is Rs. 33957 at the rate of Rs.7 per cubic meter. What will be the radius of the ball?

11. Determine the volume of a conical tin having radius of the base 30cm and slant height 50cm.

12. Two cylindrical vessels are filled with oil. The radius of one vessel is 15cm and its height is 25cm. The radius and height of the other vessel are 10cm and 18cm respectively. Find the radius of a cylindrical vessel of 30cm height , which will just contain the two given vessels.

13. Curved surface area of a cone is 308cm^2 and its slant height is 14cm. Find (i) radius of its base, and (ii) its total surface area.

14. Volume of a right circular cone is 2200/7 cm^3 and its diameter is 10cm. Find its slant height. Also find its curved surface area in terms of π.

15. The inner diameter of a circular well is 3.5cm and it is 10m deep. Find:
    (i)   Its inner curved surface area
    (ii)   The cost of plastering this curved surface area at the rate of Rs. 12.50 per m^2.

Assignment : IX / Maths / Surface Areas and Volumes - MCQ

1. The lateral surface area of a right circular cylinder with base radius 7cm and height 10cm is:
   a. 440cm^2
   b. 404cm^2
   c. 240cm^2
   d. None

2. Ratio of lateral surface areas of two cylinders with equal heights and radii R and r is:
   a. H:h
   b. R:r
   c. 1:2
   d. 1:1

3. Two cylinders of same volume have their heights in the ratio 1:5. The ratio of their radii is:
   a. √3:1
   b. √2:1
   c. √5:1
   d. 2: √5

4. The size of a cuboid is 8cmx6cmx5cm. Its total surface area is:
   a. 236cm^2
   b. 256cm^2
   c. 224cm^2
   d. None

5. A sphere and a cube are of the same height. The ratio of their volumes is:
   a. 3:4
   b. 21:11
   c. 4:3
   d. 11:21

6. Vertical and horizontal cross-section of a right circular cylinder are always:
   a. Rectangle, Square
   b. Rectangle, Circle
   c. Square, Circle
   d. Square, Square

7. The radius of the cylinder whose lateral surface area is 704cm^2 and height 8cm is:
   a. 6cm
   b. 4cm
   c. 8cm
   d. 14cm

8. The area of base of a cone is 616cm^2 and its height is 48cm. Its total surface area is:
   a. 2816cm^2
   b. 2861cm^2
   c. 2618cm^2
   d. 2681cm^2

9. A right circular cone with radius 5cm and height 12cm is given. The total surface area of cone is:
   a. 90πcm^2
   b. 81πcm^2
   c. 243πcm^2
   d. None

10. Radius of a wooden sphere is 3.5cm. The density of the wood is 0.9gm/cm^3. Mass of the sphere is:
    a. 5cm
    b. 17cm
    c. 25cm
    d. None

11. The lateral surface area of a cylinder is 176cm^2 and its base area is 38.5cm^2. Its volume is:
    a. 830cm^3
    b. 380cm^3
    c. 308cm^3
    d. 803cm^3

12. The ratio of volumes of two cones with same radii is:
    a. h1:h2
    b. r1:r2
    c. s1:s2
    d. None

13. A hemispherical bowl is made of steel of 0.25cm thickness. The inner radius of the bowl is 5cm. The volume of the steel used is:
    a. 42.15cm^3
    b. 41.52cm^3
    c. 41.25cm^3
    d. None

14. The radii and heights of two cylinders are in the ratio 1: √3 and 2:3 respectively. Ratio of their volumes is:
    a. 1:9
    b. 2:9
    c. 4:9
    d. 5:9

Assignment : IX / Maths / Statistics

1. Find the mean of first 10 prime numbers.

2. Find the mean of the following data by short-cut method:

Marks	20	22	25	30	35	39	45	50	Total
Frequency	4	6	8	10	8	7	5	2	50

3. Draw a bar chart of the data representing pass percentage of students during the period 1998-2003 given below:

Year	1998	1999	2000	2001	2002	2003
Pass Percentage	80	75	90	70	95	85

4. Draw a histogram of the following data:

Marks	10-15	15-20	20-25	25-30	30-40	40-60	60-80
Frequency	7	9	8	5	12	12	8

5. The following number of goals were scored by a team in a series of 10 matches: 2, 3, 4, 5, 0, 1, 3, 3, 4, 3
    Find the mean and median of these scores.

6. The numbers 2, 3, 4, 4, $x+1$, $2x +1$, 10, 11, 19, 20 are written in ascending order. If the median is 7, find x. Also find mode.

7. Draw a histogram and frequency polygon of the following data:

C.I.	10-20	20-30	30-40	40-50	50-60	60-70
Frequency	4	5	9	12	7	3

8. The mean of x_1 and x_2 is 6 and mean of x_1, x_2, x_3 is 7. Find the value of x_3.

9. Write the class-size and class-limits of the class intervals for which the class marks are as: 104, 114, 124, 134, 144, 154, 164

10. Study the given histogram and answer the questions:
    (i) How many teachers are below 30 years in age?
    (ii) How many teachers are above 30 years in age?
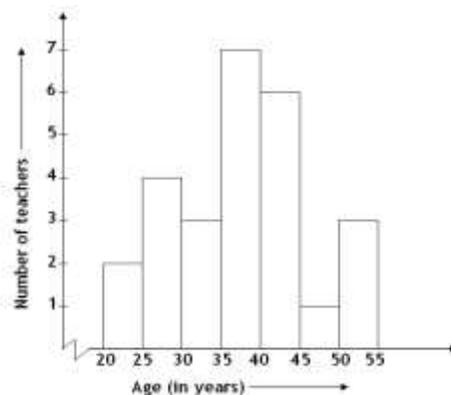
Assignment : IX / Maths / Statistics - MCQ

1. Arithmetic mean of first five natural numbers is:
   a. 1
   b. 2
   c. 3
   d. 4

2. The mean of *x*, *x+3, x+6, x+9, and x+12 is*:
   a. *x*+6
   b. *x*+9
   c. *x*+12
   d. *x*+3

3. The mean of 20 numbers is 15. If 2 is added to each of the first 10 numbers, then mean of the new set of 20 numbers is:
   a. 17
   b. 16
   c. 30
   d. 13

4. In a data 10 numbers, the numbers are arranged in ascending order. If the 7th entry is increased by 4, the meadian is increased by:
   a. 0
   b. 4
   c. 6
   d. 5

5. The mean of all factors of 24 is:
   a. 7
   b. 7.25
   c. 7.50
   d. 7.75

6. Mean of first 6 multiples of 4 is:
   a. 13.5
   b. 14.5
   c. 14
   d. 16

7. The mean of 1/3, 3/4, 5/6, 1/2, and 7/12 is:
   a. 1/5
   b. 2/5
   c. 3/5
   d. None

8. The sum of 15 numbers is 420. The mean of these numbers is:
   a. 25
   b. 30
   c. 28
   d. None

9. Mean of 20 obs. was calculated as 15.5. Later it was found that the obs. 24 was misread as 42. The corrected mean is:
   a. 14.0
   b. 14.2
   c. 14.6
   d. None

10. Given class intervals 0-10, 10-20, 20-30, ... An observation 20 is considered in the class:
    a. 0-10
    b. 10-20
    c. 20-30
    d. None

Assignment : IX / Maths / Probability

1. A fair coin is tossed 100 times and the head occurs 58 times. Find The experimental probability of getting a tail.

2. In a book there are 200 pages. On some pages there are printing mistakes. The frequency distribution of printing mistakes is given below:

No. of Mistakes	0	1	2	3	4	5	6
No. of pages	88	32	30	20	15	10	5

What is the probability that on a given page of the book there are
   (i)   More than 3 printing mistakes
   (ii)   3 printing mistakes
   (iii)   Less than 3 printing mistakes

3. 3 coins are tossed simultaneously 300 times with the following frequencies of different outcomes:

Outcome	3 Heads	2 Heads	1 Head	No Head
Frequency	48	97	102	53

Find the experimental probability of getting (i) 2 heads, (ii) at least 2 heads, (iii) at most 2 heads.

4. A die is thrown 1000 times with the frequencies for the outcomes 1, 2, 3, 4, 5, and 6 as given in the following table:

Outcome	1	2	3	4	5	6
Frequency	179	150	157	149	175	190

Find the probability of getting each outcome.

5. The record of a weather station shows that out of the past 300 days, its forecast were correct 250 times. What is the probability that
   (i)   On a given day, the forecast was correct
   (ii)   The forecast was not correct on a given day

6. The distance (in km) of 40 engineers from their residence to their place of work were found as follows:

5	3	10	20	25	11	13	7	12	31
19	10	12	17	18	11	32	17	16	2
8	9	7	8	3	5	12	15	18	3
12	14	2	9	6	15	15	7	6	12

What is the empirical probability that an engineer lives:
   (i)   Less than 7km from her place of work
   (ii)   More than or equal to 7km from her place of work

(iii)   Within ½ km from her place of work

7. A die is thrown 500 times with the frequencies for the outcomes 1, 2, 3, 4, 5, and 6 as given in the following table:

Outcome	1	2	3	4	5	6
Frequency	80	75	90	75	85	95

Find the probability of getting an outcome less than 4.

8. Fifty seeds were selected at random from each of the 5 bags of seeds, and were kept under standard conditions favorable to germination. After 20 days, the number of seeds that had germinated in each collection were counted and recorded as follows:

Bag	1	2	3	4	5
No. of seeds germinated	40	48	42	39	41

What is the probability of germination of
   (i)   More than 40 seeds in a bag
   (ii)   49 seeds in a bag

9. A tyre manufacturer company kept a record of the distance covered before a tyre needed to be replaced. Following table shows the result of 2000 cases:

Distance (in km)	Less than 4000	4000 to 9000	9001 to 14000	More than 14000
Frequency	40	420	650	890

If you buy a tyre of this company, what is the probability that:
   (i)   It will need to be replaced before it has covered 4000km
   (ii)   It will cover more than 9000km before it needs to be replaced

10. The percentage of marks obtained by a student in the monthly unit tests are given by:

Unit Test	I	II	III	IV	V
%age of marks obtained	58	64	76	62	85

Find the probability that the student gets:
   (i)   A first class, i.e., at least 60% marks
   (ii)   Marks between 60% and 80%
   (iii) A distinction, i.e., 75% or above
   (iv)   Less than 65% marks

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