

**ABM PUBLIC SCHOOL, RIWAZPUR**

***HOLIDAYS HOMEWORK(2023-24)***

***CLASS -IX***



**HOPE YOUR SUMMER IS FILLED WITH READING,  
WRITING, AND MOST OF ALL...FUN!**

## SCIENCE

1. Define motion. What do you understand by the term uniform motion and non-uniform motion with examples?
2. What is the difference between distance and displacement?
3. Is displacement a scalar quantity?
4. What does the odometer of an automobile measure?
5. Conversion in meter, centimeter, millimeter, micrometer?
6. An ant travels 8 cm from P to Q and moves 6 cm at right angles to PQ. find its resultant displacement?
7. Ram travels on a straight road. He goes from position A to position B. the distance between A and B is 4 km. now from position B he turns back and travels 2 km to reach the position C. Find the total distance and displacement?
8. An athlete completes one round of a circular track of diameter 200 m in 30 sec. find the distance travelled by the athlete and the magnitude of the displacement of the athlete at the end of 30 s.
9. A particle is moving in a circular path of radius r. what would be the displacement after half a circle?
10. A particle moves in a circle with O as center and  $AO=OB=5$  cm, it start from A. calculate the distance covered and displacement, when it reaches B.

### QUESTION ANSWERS:

1. When a crystal of potassium permanganate is placed in a beaker, its purple color spreads throughout the water. What does this observation tell us about the nature of potassium permanganate and water?
2. Explain how, the smell of food being cooked in the kitchen reaches us even from a considerable distance?
3. Honey is more viscous than water. Can you suggest why?
4. Explain why, diffusion occurs more quickly in a gas than in a liquid?
5. Name the three states of matter. Give one example of each?
6. Which produces more severe burns: boiling water or steam? Why?
7. Define 'melting point' of a substance? What is the melting point of the ice?
8. Define 'boiling point' of a substance? What is the boiling point of water?
9. Explain briefly, how gases can be liquefied?
10. Why does the temperature of a substance remain constant during the change of state?

### PROJECTS

#### Make an illustrative CHART/model of the following:

1. Make a well labelled chart on plant cell and animal cell illustrating the differences in between them.
2. Make a 3 D model on any of the topic of your choice form the chapter "Matter in our Surroundings"

#### READ THESE INSTRUCTIONS FIRST

1. Answer all questions.
2. Do not use class notebook for doing holiday homework. Write your name, class and section on the cover page

## ENGLISH

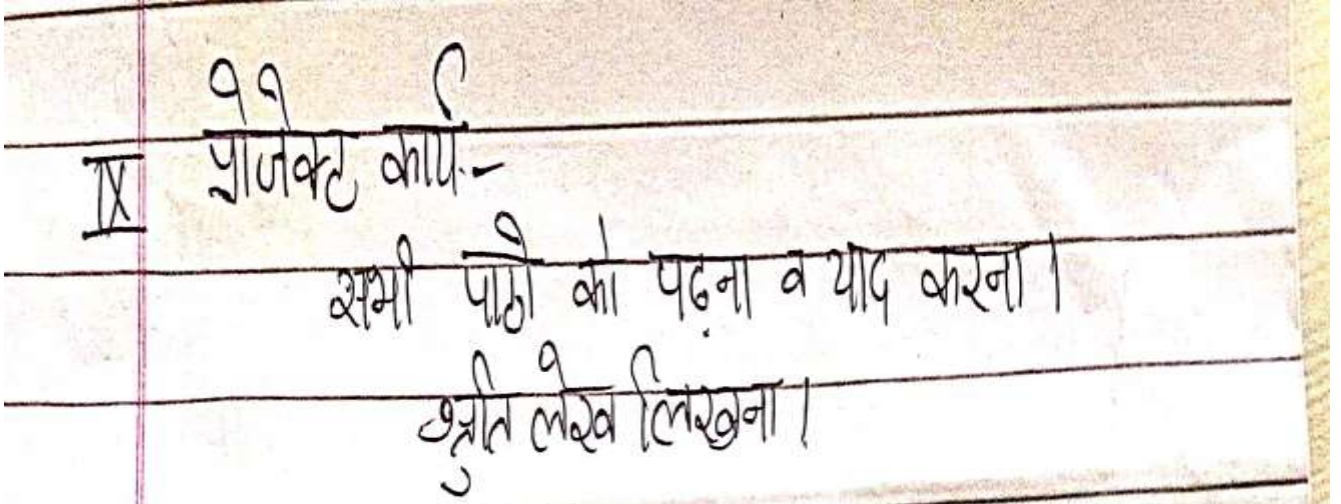
- Revise all the syllabus for PT 2
- The little girl

- The Adventure of Toto
- The Rain on the roof
- Omissions
- Editing
- Complete the exercises of COMPACTA :
  - i) Module 1
  - ii) Module 2
  - iii) Module 3
  - iv) Module 4
  - v) Module 6
- Read Newspaper daily & Maintain a booklet of current affairs.
- Make a pocket dictionary at least 5 words of each letter.
- Write a self composed poetry on the given each topic with minimum 4 stanzas .
  - i) Who I am
  - ii) Music
  - iii) The world
- Make a chart of tenses consisting rules & examples.

### **SOCIAL STUDIES**

- ✓ All the questions must be done in the most creative, accurate and innovation manner.
- ✓ The activities must be done in homework notebook itself.
- ✓ usage of pictures and graphs is compulsory for the activities.
- \* The following assignment has to be done in the notebook.
  1. What is jacobin club?
  2. Name any three non form activities that work performed by people in Palampur?
  3. Why does India use a standard meridian? what is the standard meridian for India?
  4. Elaborate the French society structure in the 18th century.
  5. Why is that the northern plains the most populated and Island is moderately populated?
  6. Write Rise and falls of Napoleon Bonaparte. make a album of Napoleon?
  7. What is the latitudinal and longitudinal extent of India?
  8. How did the businessman purpose their work in Palampur?
  9. Write the merits and demerits of democracy?
  10. What are the modern tools and techniques used by the farmer now a days. make a list of it and write about formal source of credit.
- \* Make a manuscript :take a broad leaf. put it under a heavy book for 10 days. on the leaf write the preamble of the Indian constitution.
- \* Map skills -  
Take a physical map of India and mark the following.  
Tropic of Cancer, standard meridian, southernmost point, northernmost point ,easternmost point and Western most point of India.

## HINDI



## COMPUTER




### PROJECT:

- A. FIND AND PASTE IT ON A CHART PAPER
  1. GENERATIONS OF COMPUTER
  2. HISTORY OF COMPUTER
  3. TYPES OF COMPUTER
- B. EXPLAIN E-COMMERCE IN DETAIL (ON A4 PAPER)
- C. PREPARE A BLOCK DIAGRAM OF COMPUTER ON A CHART PAPER.

A B M PUBLIC SCHOOL  
SUBJECT –MATHEMATICS  
HOLIDAY HOMEWORK 2023-24

**Class :- IX**

*Summer Vacation, 2023-24*

<b>SUBJECT :</b>	<b>MATHEMATICS</b>
	 
<b>Work Specification :</b>	<p><b>[Part A]</b> Make an animated power point presentation on the topic (1) Polynomials or (2) coordinate geometry or (3) Linear equations in two variables</p> <p><b>[Part B]</b> Solve the given worksheet in your HW notebook and practical file experiment .</p>
<b>Materials Required :</b>	Computer (MS-office), HW notebook.
<b>Instructions / Guidelines :</b>	<p><b><u>General Guidelines for Students:</u></b></p> <p><b>[part A]</b></p> <p>(i) The power point presentation should between 15 to 20 slides.</p> <p>(ii) In each slide there should be animations.</p> <p><b>[Part B]</b></p> <p>(i) Solve all the questions in your HW notebook.</p>

**MCQ WORKSHEET-ii**  
**CLASS IX : CHAPTER - 2**  
**POLYNOMIALS**

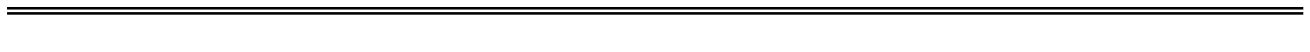
1. The zero of  $p(x) = 2x - 7$  is:  
(a)  $\frac{7}{2}$       (b)  $\frac{2}{7}$       (c)  $\frac{-2}{7}$       (d)  $\frac{-7}{2}$
  2. The zero of  $p(x) = 9x + 4$  is:  
(a)  $\frac{4}{9}$       (b)  $\frac{9}{4}$       (c)  $\frac{-4}{9}$       (d)  $\frac{-9}{4}$
  3. Which are the zeroes of  $p(x) = x^2 - 1$ :  
(a) 1, -1      (b) -1, 2      (c) -2, 2      (d) -3, 3
  4. Which are the zeroes of  $p(x) = (x - 1)(x - 2)$ :  
(a) 1, -2      (b) -1, 2      (c) 1, 2      (d) -1, -2
  5. Which one of the following is the zero of  $p(x) = lx + m$   
(a)  $\frac{m}{l}$       (b)  $\frac{l}{m}$       (c)  $-\frac{m}{l}$       (d)  $-\frac{l}{m}$
  6. Which one of the following is the zero of  $p(x) = 5x - \pi$  :  
(a)  $-\frac{4}{5}\pi$       (b)  $\frac{1}{5}\pi$       (c)  $\frac{4}{5}\pi$       (d) none of these
  7. On dividing  $x^3 + 3x^2 + 3x + 1$  by  $x$  we get remainder:  
(a) 1      (b) 0      (c) -1      (d) 2
  8. On dividing  $x^3 + 3x^2 + 3x + 1$  by  $x + \pi$  we get remainder:  
(a)  $-\pi^3 + 3\pi^2 - 3\pi + 1$   
(b)  $\pi^3 - 3\pi^2 + 3\pi + 1$   
(c)  $-\pi^3 - 3\pi^2 - 3\pi - 1$   
(d)  $-\pi^3 + 3\pi^2 - 3\pi - 1$
  9. On dividing  $x^3 + 3x^2 + 3x + 1$  by  $5 + 2x$  we get remainder:  
(a)  $\frac{8}{27}$       (b)  $\frac{27}{8}$       (c)  $-\frac{27}{8}$       (d)  $-\frac{8}{27}$
  10. If  $x - 2$  is a factor of  $x^3 - 3x + 5a$  then the value of  $a$  is:  
(a) 1      (b) -1      (c)  $\frac{2}{5}$       (d)  $\frac{-2}{5}$
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**MCQ WORKSHEET-III**  
**CLASS IX : CHAPTER - 2**  
**POLYNOMIALS**

1.  $(x + 8)(x - 10)$  in the expanded form is:  
(a)  $x^2 - 8x - 80$       (b)  $x^2 - 2x - 80$       (c)  $x^2 + 2x + 80$       (d)  $x^2 - 2x + 80$
  2. The value of  $95 \times 96$  is:  
(a) 9020      (b) 9120      (c) 9320      (d) 9340
  3. The value of  $104 \times 96$  is:  
(a) 9984      (b) 9624      (c) 9980      (d) 9986
  4. Without actual calculating the cubes the value of  $28^3 + (-15)^3 + (-13)^3$  is:  
(a) 16380      (b) -16380      (c) 15380      (d) -15380
  5. If  $x - 2$  is a factor of  $x^3 - 2ax^2 + ax - 1$  then the value of  $a$  is:  
(a)  $\frac{7}{6}$       (b)  $-\frac{7}{6}$       (c)  $\frac{6}{7}$       (d)  $-\frac{6}{7}$
  6. If  $x + 2$  is a factor of  $x^3 + 2ax^2 + ax - 1$  then the value of  $a$  is:  
(a)  $\frac{2}{3}$       (b)  $\frac{3}{5}$       (c)  $\frac{3}{2}$       (d)  $\frac{1}{2}$
  7. If  $x + y + z = 0$  then  $x^3 + y^3 + z^3$  is equal to  
(a)  $3xyz$       (b)  $-3xyz$       (c)  $xy$       (d)  $-2xy$
  8. The factors of  $2x^2 - 7x + 3$  are:  
(a)  $(x - 3)(2x - 1)$       (b)  $(x + 3)(2x + 1)$   
(c)  $(x - 3)(2x + 1)$       (d)  $(x + 3)(2x - 1)$
  9. The factors of  $6x^2 + 5x - 6$  are:  
(a)  $(2x - 3)(3x - 2)$       (b)  $(2x - 3)(3x + 2)$   
(c)  $(2x + 3)(3x - 2)$       (d)  $(2x + 3)(3x + 2)$
  10. The factors of  $3x^2 - x - 4$  are:  
(a)  $(3x - 4)(x - 1)$       (b)  $(3x - 4)(x + 1)$   
(c)  $(3x + 4)(x - 1)$       (d)  $(3x + 4)(x + 1)$
  11. The factors of  $12x^2 - 7x + 1$  are:  
(a)  $(4x - 1)(3x - 1)$       (b)  $(4x - 1)(3x + 1)$   
(c)  $(4x + 1)(3x - 1)$       (d)  $(4x + 1)(3x + 1)$
  12. The factors of  $x^3 - 2x^2 - x + 2$  are:  
(a)  $(x - 1)(x - 1)(x - 5)$       (b)  $(x + 1)(x + 1)(x + 5)$   
(c)  $(x + 1)(x - 1)(x + 5)$       (d)  $(x + 1)(x + 1)(x - 5)$
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**MCQ WORKSHEET-II**  
**CLASS IX : CHAPTER - 3**  
**COORDINATE GEOMETRY**

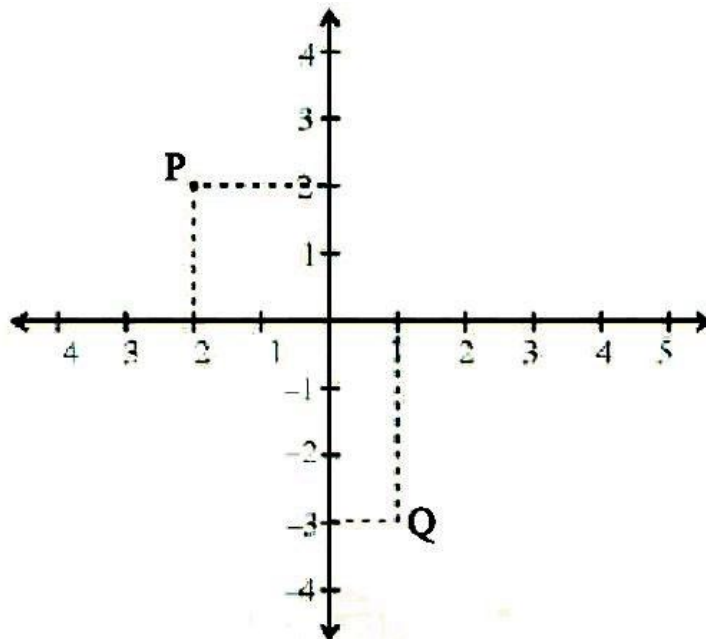
1. Point  $(0, -2)$  lies in the:  
(a) on the negative direction of  $x$  – axis    (b) on the negative direction of  $y$  – axis  
(c) in the I quadrant    (d) in the II quadrant
2. Abscissa of the all the points on  $x$  – axis is:  
(a) 0    (b) 1    (c)  $-1$     (d) any number
3. Ordinate of the all the points on  $x$  – axis is:  
(a) 0    (b) 1    (c)  $-1$     (d) any number
4. Abscissa of the all the points on  $y$  – axis is:  
(a) 0    (b) 1    (c)  $-1$     (d) any number
5. Ordinate of the all the points on  $y$  – axis is:  
(a) 0    (b) 1    (c)  $-1$     (d) any number
6. A point both of whose coordinates are negative will lie in:  
(a) I quadrant    (b) II quadrant    (c)  $x$  – axis    (d)  $y$  – axis
7. A point both of whose coordinates are positive will lie in:  
(a) I quadrant    (b) II quadrant    (c)  $x$  – axis    (d)  $y$  – axis
8. If  $y$  – coordinate of a point is zero, then this point always lies:  
(a) I quadrant    (b) II quadrant    (c)  $x$  – axis    (d)  $y$  – axis
9. If  $x$  – coordinate of a point is zero, then this point always lies:  
(a) I quadrant    (b) II quadrant    (c)  $x$  – axis    (d)  $y$  – axis
10. The point  $(1, -1), (2, -2), (4, -5), (-3, -4)$  lies in:  
(a) II quadrant    (b) III quadrant    (c) IV quadrant  
(d) do not lie in the same quadrant
11. The point  $(1, -2), (2, -3), (4, -6), (2, -7)$  lies in:  
(a) II quadrant    (b) III quadrant    (c) IV quadrant  
(d) do not lie in the same quadrant
12. The point  $(-5, 2)$  and  $(2, -5)$  lies in:  
(a) same quadrant    (b) II and III quadrant, respectively  
(c) II and IV quadrant, , respectively    (d) IV and II quadrant, respectively
13. The point whose ordinate is 4 and which lies on  $y$  – axis is:  
(a)  $(4, 0)$     (b)  $(0, 4)$     (c)  $(1, 4)$     (d)  $(4, 2)$
14. Abscissa of a point is positive in:  
(a) I and II quadrant    (b) I and IV quadrant  
(c) I quadrant only    (d) II quadrant only
15. The perpendicular distance of the point  $P(3,4)$  from the  $y$  – axis is:  
(a) 3    (b) 4    (c) 5    (d) 7



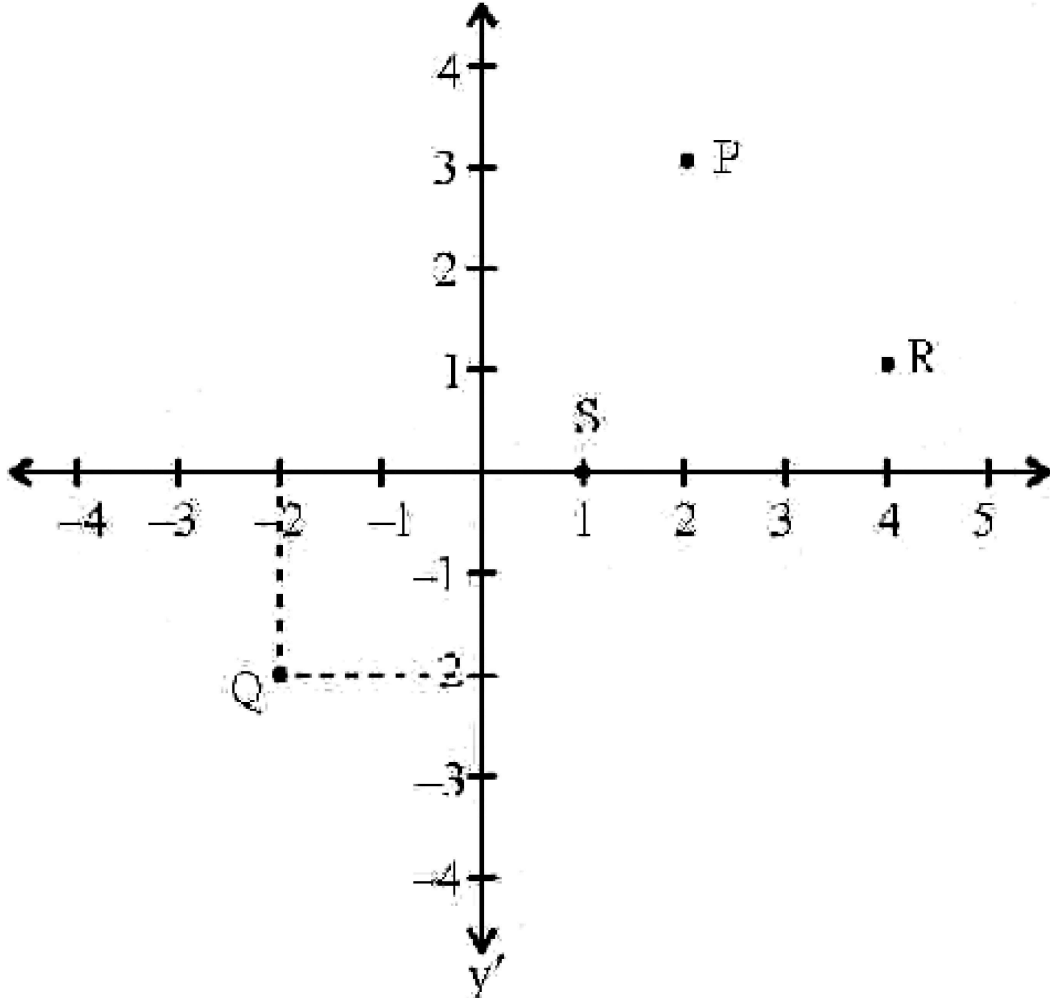


**MCQ WORKSHEET-III**  
**CLASS IX : CHAPTER - 3**  
**COORDINATE GEOMETRY**

1. The point  $(-2, -5)$  lies in the  
(a) I quadrant      (b) II quadrant      (c) III quadrant      (d) IV quadrant
2. The sign of x-coordinate of a point lying in third quadrant is  
(a) +      (b) -      (c)  $\pm$       (d) IV quadrant
3. The signs of respective x-coordinate and y-coordinates of a point lying 2<sup>nd</sup> quadrant are  
(a) -, +      (b) -, -      (c) +, -      (d) +, +
4. The point  $(0, 4)$  lies on  
(a) I quadrant      (b) negative x - axis      (c) positive x - axis      (d) y - axis
5. The y-coordinate of any point lying on x-axis is  
(a) 0      (b) 1      (c) -1      (d) any number
6. The point where the two axes meet, is called  
(a) x-coordinate      (b) y- coordinate      (c) quadrant      (d) origin
7. The point  $(-5, 4)$  and  $(4, -5)$  are situated in  
(a) same quadrant      (b) I and III quadrant, respectively  
(c) Different quadrants      (d) IV and II quadrant, respectively
8. The figure obtained by plotting the points  $(2, 3)$ ,  $(-2, 3)$ ,  $(-2, -3)$  and  $(2, -3)$  is a  
(a) trapezium      (b) rectangle      (c) square      (d) rhombus
9. In the given figure, on the sides the respective coordinates of points P and Q respectively are:  
(a)  $(-2, -2)$ ,  $(1, 3)$       (b)  $(-2, -2)$ ,  $(-1, 3)$       (c)  $(-2, 2)$ ,  $(1, -3)$       (d)  $(-2, 2)$ ,  $(1, 3)$



10. The point  $(0, -3)$  lies on  
 (a) negative side of  $y$  - axis (b) negative side of  $x$  - axis  
 (c) positive side of  $x$  - axis (d) positive side of  $y$  - axis
11. If the coordinates of two points P and Q are  $(2, -3)$  and  $(-6, 5)$ , then the value of  $(x\text{-coordinate of P}) - (x\text{-coordinate of Q})$  is  
 (a) 2 (b)  $-6$  (c)  $-8$  (d) 8
12. The point whose  $y$ -coordinate is 3 in the given figure is  
 (a) P (b) Q (c) R (d) S



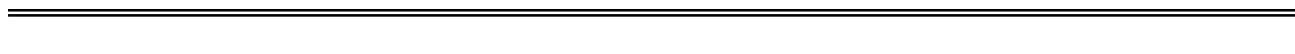
13. The coordinates of the point lying on the negative side of  $x$ -axis at a distance of 5 units from origin are  
 (a)  $(0, 5)$  (b)  $(0, -5)$  (c)  $(-5, 0)$  (d)  $(5, 0)$
14. The distance of the  $(4, -3)$  from  $x$  - axis is  
 (a) 3 units (b)  $-3$  units (c) 4 units (d) 5 units
15. The origin lies on  
 (a)  $x$ -axis only (b) both axes (c)  $y$ -axis only (d) none of the axes

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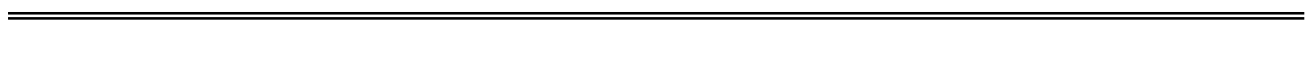
**MCQ WORKSHEET-II**  
**CLASS IX: CHAPTER – 4**  
**LINEAR EQUATION IN TWO VARIABLES**

1. Any point on the  $y = x$  is of the form  
(a)  $(a, a)$       (b)  $(0, a)$       (c)  $(a, 0)$       (d)  $(a, -a)$
2. The equation of  $x$  –axis is of the form  
(a)  $x = 0$       (b)  $y = 0$       (c)  $x + y = 0$       (d)  $x = y$
3. Graph of  $y = 6$  is a line:  
(a) parallel to  $x$  – axis at a distance 6 units from the origin  
(b) parallel to  $y$  – axis at a distance 6 units from the origin  
(c) making an intercept 6 on the  $x$  –axis.  
(d) making an intercept 6 on both the axes.
4.  $x=5, y=2$  is a solution of the linear equation  
(a)  $x + 2y = 7$    (b)  $5x + 2y = 7$       (c)  $x + y = 7$       (d)  $5x + y = 7$
5. If a linear equation has solutions  $(-2, 2), (0, 0)$  and  $(2, -2)$ , then its is of the form  
(a)  $y - x = 0$    (b)  $x + y = 0$    (c)  $-2x + y = 0$       (d)  $-x + 2y = 0$
6. The positive solutions of the equation is  $ax + by + c = 0$  always lie in the  
(a) 1<sup>st</sup> quadrant      (b) 2<sup>nd</sup> quadrant      (c) 3<sup>rd</sup> quadrant      (d) 4<sup>th</sup> quadrant
7. The graph of the linear equation  $2x + 3y = 6$  is a line which meets the  $x$  axis at the point  
(a)  $(2, 0)$       (b)  $(0, 3)$       (c)  $(3, 0)$       (d)  $(0, 2)$
8. The graph of the  $y = x$  passes through the point  
(a)  $\left(\frac{3}{2}, -\frac{3}{2}\right)$    (b)  $\left(0, \frac{3}{2}\right)$       (c)  $(1, 1)$       (d)  $\left(\frac{-1}{2}, \frac{1}{2}\right)$
9. If we multiply or divide both sides of a linear equation with a non-zero number, then the solution of the linear equation:  
(a) changes      (b) remains the same  
(c) changes in case of multiplication only      (d) changes in case of division only
10. How many linear equation in  $x$  and  $y$  can be satisfied by  $x = 1$  and  $y = 2$ ?  
(a) only one      (b) two      (c) infinitely many      (d) three
11. The point of the form  $(a, a)$  always lies on:  
(a)  $x$  – axis      (b)  $y$  – axis      (c) on the line  $y = x$       (d) on the  $x + y = 0$
12. The point of the form  $(a, -a)$  always lies on:  
(a)  $x = a$       (b)  $y = -a$       (c)  $y = x$       (d)  $x + y = 0$



**MCQ WORKSHEET-III**  
**CLASS IX: CHAPTER – 4**  
**LINEAR EQUATION IN TWO VARIABLES**

1. Which of the following is not a linear equation in two variables?  
(a)  $ax + by = c$     (b)  $ax^2 + by = c$     (c)  $2x + 3y = 5$     (d)  $3x + 2y = 6$
2. The graph of  $ax + by + c = 0$  is  
(a) a straight line parallel to x-axis    (b) a straight line parallel to y-axis  
(c) a general straight line    (d) a line in the 2<sup>nd</sup> and 3<sup>rd</sup> quadrant
3. The solution of a linear equation in two variables is  
(a) a number which satisfies the given equation  
(b) an ordered pair which satisfies the given equation  
(c) an ordered pair, whose respective values when substituted for x and y in the given equation, satisfies it  
(d) none of these
4. One of the solution of a linear equation in two variables is  
(a) (3, 2)    (b) (3, -2)    (c) (2, 3)    (d) (-2, -3)
5. The ordered pair (m, n) satisfies the equation  $ax + by + c = 0$  if  
(a)  $am + bn = 0$     (b)  $c = 0$     (c)  $am + bn + c = 0$     (d)  $am + bn - c = 0$
6. The equation of x – axis is  
(a)  $a = 0$     (b)  $y = 0$     (c)  $x = 0$     (d)  $y = k$
7. From the graph of a line, we can find the coordinates of  
(a) only two point lying on the line  
(b) only two points only lying on the line.  
(c) only finite number of points lying on the line.  
(d) only infinite number of points lying on the line.
8. A linear equation in two variables has  
(a) no solution    (b) only one solution    (c) only two solutions    (d) infinitely many solutions
9. An equation of the form  $ax + by + c = 0$  represents a linear equation in two variables, if  
(a)  $a = 0, b \neq 0$     (b)  $a \neq 0, b = 0$     (c)  $a = 0, b = 0$     (d)  $a = 0, b \neq 0$
10. The graph of the linear equation in two variables  $y = mx$  is  
(a) a line parallel to x – axis    (b) a line parallel to y – axis  
(c) a line passing through the origin    (d) not a straight line



**MCQ WORKSHEET-I**  
**CLASS IX: CHAPTER - 12**  
**HERON'S FORMULA**

1. The sides of a triangular plot are in the ratio of 3 : 5 : 7 and its perimeter is 300 m. Find its area.  
(a)  $4\sqrt{30}$       (b)  $8\sqrt{30}$       (c)  $12\sqrt{30}$       (d)  $16\sqrt{30}$
  2. Find the area of a triangle, two sides of which are 8 cm and 11 cm and the perimeter is 32 cm  
(a)  $1500\sqrt{3}$       (b)  $3000\sqrt{3}$       (c)  $4500\sqrt{3}$       (d)  $6000\sqrt{3}$
  3. Find the area of a triangle two sides of which are 18cm and 10cm and the perimeter is 42cm.  
(a)  $14\sqrt{11}$       (b)  $21\sqrt{11}$       (c)  $35\sqrt{11}$       (d)  $21\sqrt{11}$
  4. Sides of a triangle are in the ratio of 12 : 17 : 25 and its perimeter is 540cm. Find its area.  
(a) 6000      (b) 9000      (c) 12000      (d) none of these
  5. The height corresponding to the longest side of the triangle whose sides are 42 cm, 34 cm and 20 cm in length is  
(a) 15 cm      (b) 36 cm      (c) 16 cm      (d) none of these
  6. A park, in the shape of a quadrilateral ABCD, has  $\angle C = 90^\circ$ , AB = 9 m, BC = 12 m, CD = 5 m and AD = 8 m. How much area does it occupy?  
(a)  $56.4 \text{ m}^2$       (b)  $55.4 \text{ m}^2$       (c)  $65.4 \text{ m}^2$       (d) none of these
  7. Find the area of a quadrilateral ABCD in which AB = 3 cm, BC = 4 cm, CD = 4 cm, DA = 5 cm and AC = 5 cm.  
(a)  $15 \text{ cm}^2$       (b)  $15.4 \text{ cm}^2$       (c)  $15.2 \text{ cm}^2$       (d) none of these
  8. If the area of an equilateral triangle is  $81\sqrt{3} \text{ cm}^2$ , then its height is  
(a)  $9\sqrt{3}$       (b)  $3\sqrt{3}$       (c)  $12\sqrt{3}$       (d) none of these
  9. A rhombus shaped field has green grass for 18 cows to graze. If each side of the rhombus is 30 m and its longer diagonal is 48 m, how much area of grass field will each cow be getting?  
(a)  $45 \text{ m}^2$       (b)  $48 \text{ m}^2$       (c)  $51 \text{ m}^2$       (d) none of these
  10. The altitude of a triangular field is one-third of its base. If the cost of sowing the field at Rs 58 per hectare is Rs. 783 then its altitude is  
(a) 900 m      (b) 600 m      (c) 300 m      (d) none of these
  11. A triangle and a parallelogram have the same base and the same area. If the sides of the triangle are 26 cm, 28 cm and 30 cm, and the parallelogram stands on the base 28 cm, find the height of the parallelogram.  
(a) 12 cm      (b) 15 cm      (c) 18 cm      (d) none of these
  12. Area of equilateral triangle of side a unit is  
(a)  $\frac{\sqrt{3}}{2}a^2$       (b)  $\frac{\sqrt{3}}{4}a^2$       (c)  $\frac{\sqrt{3}}{2}a$       (d) none of these
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