ANAND PUBLIC SCHOOL

"Summer vacation is the best time for families to slow down, reconnect, and spend meaningful 'US' time together."

Dear Parents,

Summer Vacation offers a refreshing break for children - a chance to relax, explore, and rejuvenate. More than just a pause from school work, it's a precious time to nurture bonds, foster creativity and plant the seeds of values and memories that last a lifetime.

Children may not remember every toy they receive, but they will always carry the warmth of stories told, meals shared and moments spent with their loved ones. Let's use this opportunity to guide, support and connect with them in ways that matter most.

Below are few suggestions:-

1. All homework must be written clearly and neatly.
2. Assignments should be completed independently by the students. Parental support is encouraged, but the effort should reflect the child's own capabilities.
3. Try conversing in English to help them be comfortable with the language.
4. Ensure that all work is completed within the given time frame.
5. Holidays homework will be assessed and carry weight in evaluations across all subjects.
6. Children are likely to follow their routine if we give them Positive instructions and lots of praise/appreciation for what they do right.
7. Science week is celebrated in the month of July to enhance the scientific attitude.
8. Encourage daily reading. Cultivating a reading habit is key to lifelong learning.

DATESHEET FOR P.T. - 2 **DATESHEET FOR P.T. - 3**

DATE	IX	XI	X	XII
JULY 08, 2025	English	Phy. Edu.	I.T.	Phy. Edu.
JULY 11, 2025	Hindi	Acc./Phy./Pol. Sci.	Hindi	Acc./Phy./Pol. Sci.
JULY 15, 2025	Science	English	Science	English
JULY 18, 2025	S.St.	B.Std./Chem./Hindi	S.St.	B.Std./Chem./Hindi
JULY 22, 2025	Maths	Eco./Bio.	Maths	Eco./Bio.
JULY 25, 2025	I.T.	Maths	English	Maths
JULY 26, 2025	.....	Music	.....	Music

School will reopen on July 02, 2025 (Wednesday)

Holidays Homework will be uploaded on E-Care and our website.

Wishing you all a joyful, relaxing and enriching Summer Break

Enjoy, Enrich, Empower!

HOLIDAYS HOMEWORK FOR CLASS - IX

SESSION: (2025-26)

Chemistry

Chapter 1 - Matter in Our Soundings
Section - 1

1. What are the conditions for something to be called matter?
2. Which single term is used to describe the mixing of copper sulphate and water kept in a beaker ,on its own?
3. When sugar is dissolved in water, there is no increase in the volume. Which characteristics of matter is illustrated by this observation?
4. When an incense stick (agarbatti) is lighted in one corner of a room, it's fragrance spreads in the whole room quickly. Which characteristics of the particles of matter is illustrated by this observation?
5. Out of solids, liquids and gases, which one has:
   (a) Maximum movement of particles?
   (b) Maximum interparticle attractions?
   (c) Minimum spaces between particles?
6. Which of the following substances is most compressible? O_2, H_2O, Sugar

In the following questions 7 to 10, the Assertions (A) and Reason (s) (R) have been put forward. Read both the statements carefully and choose the correct alternative from the following;

(A) Both the Assertion and the reason are correct and the reason is the correct explanation of the Assertion.

(B) The Assertion and the reason are correct but the reason is not the correct explanation of the reason.

(C) Our assertion is true reason is false

d) the statement of the Assertion is false but the reason is true.

E) Both the statements are false.

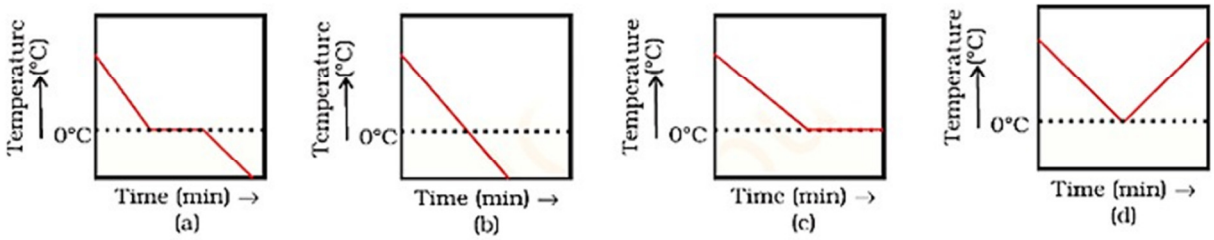
7) Assertion: A stream of water flowing through a tap can be cut with our finger.
Reason: the water from the water always flows down due to gravitational pull.

8) Assertion: Gases exert pressure on the walls of the container.
Reason: gases are in continuous state of random motion so the particles keep hitting the walls.

9) Assertion: Evaporation cases cooling.
Reason: Evaporation is a slow process.

10) Assertion: solid CO_2 is known as a dry ice.
Reason: solid CO_2 acts as a dehydrating agent

11) A glass tumbler containing hot water is kept in the freezer compartment of a refrigerator (temperature<O°C) if you could measure the temperature of the content of the tumbler, which of the following graphs would correctly represent the change in its temperature as a function of time.



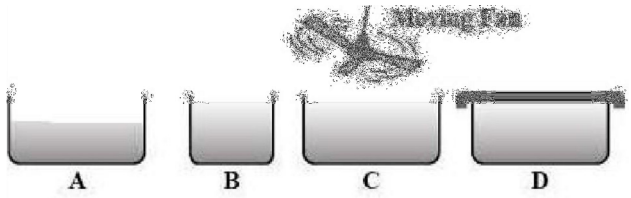
Section B

12) Convert the following temperatures from k to °C or vice-versa.

a) 234 K b) 573 K c) -155°C d) 36°C e) 373°C

13) Sodium salt and sugar have similar appearance. Why are these classified as different substances?

14) Look at the figure below and suggest in which of the vessels A, B, C or D the rate of evaporation will be the highest? Explain.



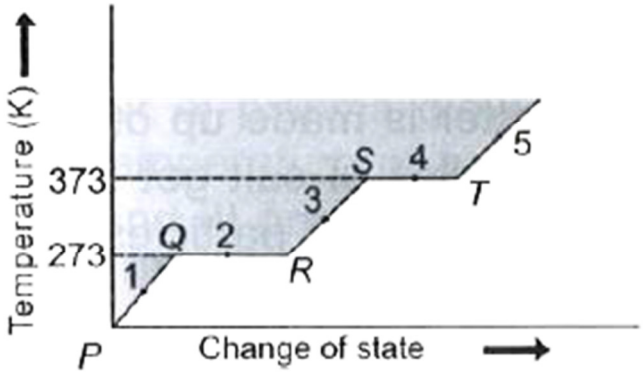
15) Name the state of matter in which

a) Layers of articles can sleep and slide over each other.

b) Particles just move around randomly, because of very weak force of attraction.

16) Alka was making tea in a kettle. Suddenly she felt intense heat from the puff of steam gushing out of the spout of the kettle. She wondered whether the temperature of the steam was higher than that of the water boiling in kettle. Comment.

17)



The heating curve of a pure substance at one atmosphere is shown in the fig above:-

a) What is the physical state of the substance at points A, B, C, D or E?

b) What is the melting point of the substance?

c) What is the boiling point of the substance?

d) What happens to the temperature when the substance is changing state?

e) Can the given substance be ice at point A?

18) Give reason:-

a) Rate of evaporation of an aqueous solution decreases when increase in humidity.

b) Perspiration keeps our body cool.

c) A gas cylinder cannot be half filled.

19) A sample of water under study was found to boil at 102 ° C at normal temperature and pressure .Is the water pure? Will this water freeze 0 °C? Comment.

20) a) Conversion of solid to vapour is called sublimation. Name the term used to denote the conversion of vapours to solid.

b) Conversion of solid state to liquid state is called fusion, what is meant by Latent heat of fusion?

Social Science

- Learn and Revise the syllabus for P.T-2
  - History:- Ch. 1
  - Eco:- Ch. 2
  - Pol Sci.:- Ch. 2
  - Geo.:- Ch. 2
- Make a project report on the topic 'Natural Vegetation and Wildlife'.
- Past the map of state and capital and map related with Ch. 1, 2 (Geo.)
- Art integrated activity - Kerala
  - Area, Location
  - Map of State
  - Flora and Fauna
  - Food
  - Culture
  - Population
  - Political Structure
  - Heritage
  - Conclusion

Science

- Complete your Practical File.
- Learn Science Lesson:-
  - Bio.:- Ch. 6 (Tissues)
  - Chem.:- Ch. 2 Is matter around us Pure?
  - Phy.:- Ch. 8 Force and Laws of Motion
- Do assignment of Biology, Chemistry and Physics in their respective notebook.

Hindi

1. आगे बढ़ती भारतीय महिलाओं की संबंधित चित्रों का संग्रह कीजिउ एवं संक्षिप्त जानकारी प्राप्त करके लिखिए।

2. 'अतिथि देवो भव' उक्ति की व्याख्या करें तथा आधुनिक युग के संदभ्र में इसका आकलन करें।

3. 'जीवन संघर्ष का ही नाम है' इस पर

4. किसी भी कंपनी की घड़ी और मोबाइल फोन के विज्ञापन तैयार कीजिए।

P.T-2 Syllabus

स्पर्श:- कविता - रहीम, गीत-अगीत

पाठ - एवरेस्ट शिखर यात्रा, तुम कब जाओगे अतिथि

व्याकरण - उपसर्ग, प्रत्यय, शब्द और पद, अनौपचारिक पत्र

English

Revised P.T-2 Syllabus

Beehive = Chapter-2 The Sound of Music, Chapter-3 The Little Girl
Poem:- Wind
Moments:- Chapter-2 The Adventure of Toto
Grammar:- Tenses
Written:- Story Writing
Do 1-5 Unseen Comprehension in your practice book

Project Work

Write the life sketch of the poet Robert Frost Collect information about his work and explain any one of the famous poem
Write the summary of the chapter - "The Little Girl" (Write in short form paste Pictures also)

- Do first three descriptive paragraphs in your practice book.
- Do first three stories in your practice book
- Do Project Work in your file.

I.T.

Write about the following topics in the project file

1. Methods of communication:- verbal, non-verbal, visual
2. Components of the computer system:- input, output, CPU, Storage devices
3. Entrepreneur
4. Goals of sustainable development
5. Types of BPO
6. The guidelines of test typing
7. Electronic spread sheet page number 235 (Write these topics in file)
8. Different types of chart (Pie graph, line graph etc.)

Revise full syllabus of P.T-2

Ch. 3 & 6

Revise following chapter also

Ch. 1, 2, 3, 6

Biology

Assignment (Ls. - Tissues)

1. What is Tissues? Give two examples
2. Define simple and compound tissue.
3. Write down the types of meristematic tissue. Draw labelled diagram.
4. Explain parenchyma, types of parenchyma and their functions.
5. Difference between collenchyma and sclerenchyma.
6. Explain complex permanent tissues, it's types with their functions.
7. Write the components of xylem and phloem.
8. Explain types of epithelial tissue. Their location, structure and functions.
9. Explain different types of connective tissues their functions, structure and functions.
10. Explain with labelled diagrams Muscular and Nervous tissue.
11. Explain the terms Cutin, Ligning and Suberin.
12. Differentiate between plant and animal tissue.

13. Assertion/ Reason type questions

1. Assertion= Parenchyma tissue helps in the storage of food in plants

   Reason= Parenchyma tissue is the main seat of photosynthesis.

2. Assertion= vascular cambium is present in dicot stems

   Reason= The vascular cambium always remain single layered it's cells always remain in a continuous state of division.

3. Assertion= Nervous tissue consists of densely packed nerve cells

   Reason= Nervous transmit nerve impulses from receptors to CNS and from CNS to effectors.

4. Assertion= Squamous epithelium consist of thin, flat, irregular shaped cells which fit together closely like tiles in the floor
   Reason= It helps in the movement of mucus, urine, eggs, sperm etc.
5. Assertion= Muscles of the body consist of long, narrow, muscle fibres
   Reason= There are of two types namely striated and smooth muscle
6. Assertion= Dense regular connective tissue consists of ordered and densely packed fibres and cell
   Reason= It is the principal component of tendors and ligaments
7. Assertion= The most distinct layer of the cortex is called endodermis
   Reason= The cells of the endodermis are non-living and bear caparian strips
8. Assertion= The narrow band of merispematic tissue present between phloem and xylem is called cambium
   Reason= In dicotyledonous stem a part of the procambium remains meristematic which is called cambium
9. Assertion= sieve tube elements have abundant cytoplasm but there is no nucleus
   Reason= Nucleus is present in companion cell
10. Assertion=whales can live in cold water as they have thick coat of blubber under the skin
    Reason= Blubber consist of adipose tissue that insulates the body.

Maths

1. 20-20 Mathematics (Book)

Do MCQ, Very Short Ans. and Case Study of Ch. 1 to 4 & 6

2. Lab manuals:- Do the activities marked in the book.

3. Revise Ch. 4 & 6 from NCERT book.

(Make a separate Notebook for Assignment & Revision)

Ch. 6 Assignment
H.W Cl. IX

Long Answer Type Questions _____ *4–5 Marks*

1. In the figure 6.49, OP bisects ∠AOC, OQ bisects ∠BOC and OP ⊥ OQ. Show that points A, O and B are collinear.

Fig. 6.49

2. In the figure 6.50, two straight lines AB and CD intersect each other at O. If ∠COE = 70°, find the values of a, b and c.

Fig. 6.50

MORE PRACTICE QUESTIONS

1. (*i*) In Fig. 6.51, POQ is a line, find x. Further, find ∠POR, ∠ROS and ∠QOS.

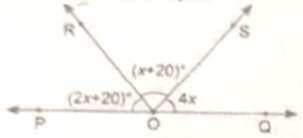


Fig. 6.51

(*ii*) In Fig. 6.52, AOB is a line, find x. Further find ∠AOC, ∠COD and ∠BOD.

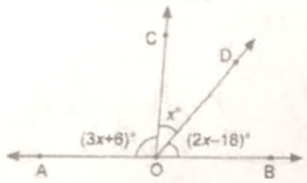


Fig. 6.52

2. (*i*) In Figure, 6.53 lines PQ and RS intersect at O. If ∠POR + ∠QOT = 105° and ∠QOS = 35°, find ∠QOT and reflex ∠ROT.

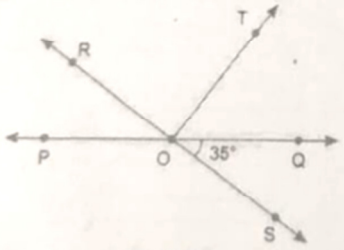


Fig. 6.53

(*ii*) In Figure 6.54, AB is an incident ray and BC is the reflected ray. If ∠ABC = 130°, find ∠QBC.

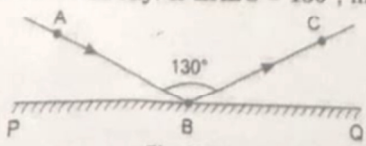


Fig. 6.54

3. In Fig. 6.55, QA and RB are the bisectors of ∠PQS and ∠PRT respectively, and ∠SQA = ∠TRB. Prove that ∠PQR = ∠PRQ.

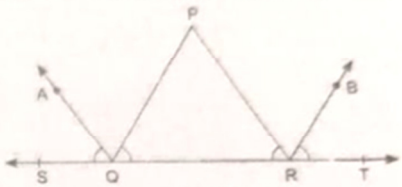


Fig. 6.55

4. In Fig. 6.56, $a + b = c + d$, then prove that ∠RC

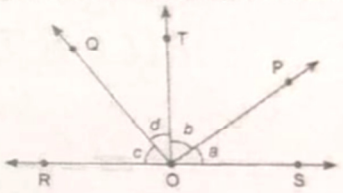


Fig. 6.56

5. It is given that ∠ABC = 76° and AB is pr point D. Draw a figure, from the given infor ray BM bisects ∠CBD, find ∠ABM and refle

6. In Fig. 6.57, ray QS bisects ∠PQR. T is the interior of ∠PQS. Prove that

$$\angle TQS = \frac{1}{2}(\angle TQR - \angle PQT).$$

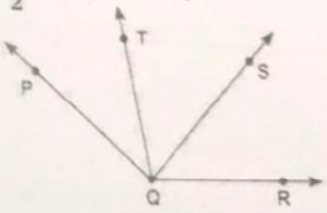


Fig. 6.57

7. In Fig. 6.58, OS bisects ∠QOR and OT bis Show that OT ⊥ OS.

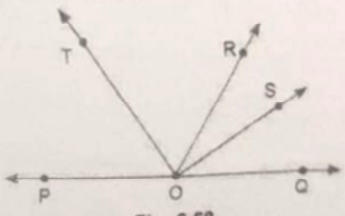


Fig. 6.58

In figure 6.40, lines PQ, UV and RS intersect each other at O. Find ∠SOV.

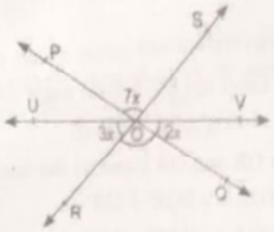


Fig. 6.40

n figure 6.41, ∠POR and ∠QOR form a linear pair. f $b - a = 60°$, find the values of a and b.

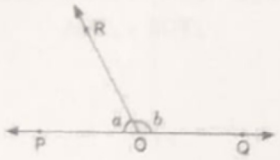


Fig. 6.41

i figure 6.42, OA, OB are opposite rays and ∠AOC ∠BOD = 90°. Find ∠COD.

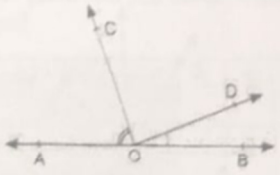


Fig. 6.42

figure 6.43, AO ⊥ OB. Find ∠AOC and ∠BOC.

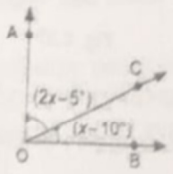


Fig. 6.43

d values of x and y in the figure:

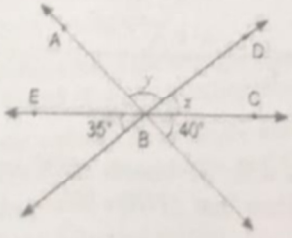


Fig. 6.44

8. In figure 6.45, prove that
$∠AOB + ∠BOC + ∠COD + ∠DOA = 360°$

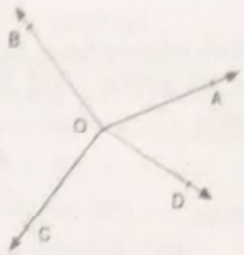


Fig. 6.45

Short Answer Type Questions – II _____ **3 Marks**

1. In figure 6.46, ∠AOB : ∠BOC = 2 : 3. If ∠AOC = 75°, then find the measures of ∠AOB and ∠BOC.

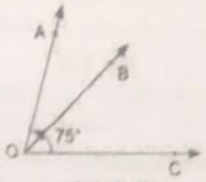


Fig. 6.46

2. In figure 6.47, OA and OB are opposite rays.
(i) If $x = 25°$, find the value of y.
(ii) If $y = 35°$, what is the value of x?

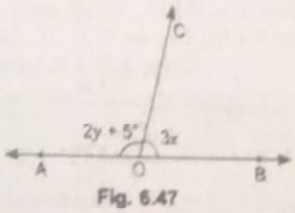


Fig. 6.47

3. Lines PQ and RS intersect each other at O (see figure). If ∠POR : ∠ROQ = 5 : 7, find all the angles a, b, c and d.

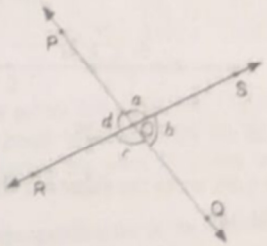


Fig. 6.48

4. It is given that ∠XYZ = 114° and XY is produced to a point P. Draw a figure from the given information. If ray YQ bisects ∠ZYP, find ∠XYQ and reflex ∠QYP.
5. "If two lines intersect each other, then the vertically opposite angles so formed are equal." Prove it.

(*NCERT Exemplar*)

EXAMPLE 2 *In the adjacent figure, ray OE bisects ∠AOB and OF is a ray opposite to OE. Show that ∠FOB = ∠FOA.*

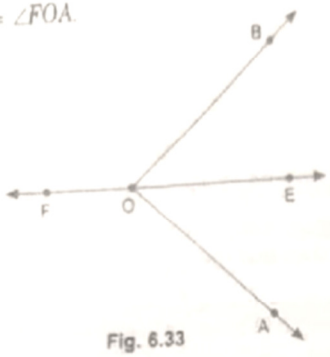


Fig. 6.33

SOLUTION Since ray OE bisects angle ∠AOB

$\therefore \quad \angle AOE = \angle BOE$

Now, ray OB and OA stand on the line FE.

$\therefore \quad \angle FOB + \angle BOE = 180°$

and $\angle FOA + \angle AOE = 180°$ ...(3) (*Linear l*

From (2) and (3), we get

$\therefore \quad \angle FOB + \angle BOE = \angle FOA + \angle AOE$

$\Rightarrow \quad \angle FOB + \angle BOE = \angle FOA + \angle BOE$

Hence, $\angle FOB = \angle FOA$.

EXERCISE 6.2

Very Short Answer Type Questions ——— *1 Mark*

1. In figure 6.34, ACB is a line. If $\angle DCA = 3x + 10°$ and $\angle DCB = 2x$, then find the value of x.

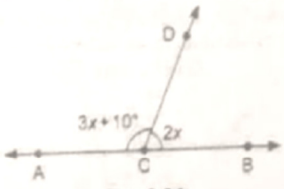


Fig. 6.34

2. In figure 6.35, find the measure of ∠DBC.

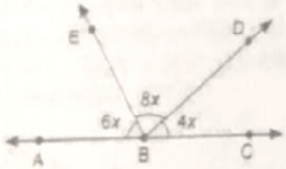


Fig. 6.35

3. In figure 6.36, write the value of x which makes POQ a straight line.

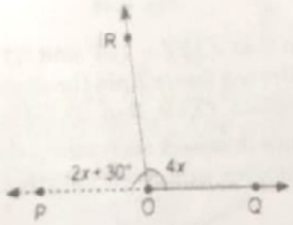


Fig. 6.36

4. In figure 6.37, find the value of x.

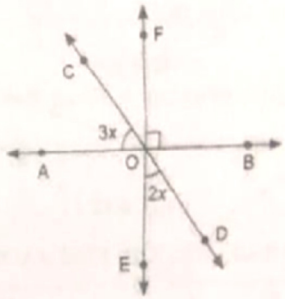


Fig. 6.37

Short Answer Type Questions - I ——— *2*

1. In figure 6.38, find the value of x.

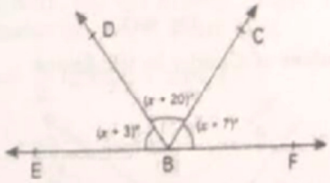


Fig. 6.38

2. In figure 6.39, OP bisects ∠BOC and OQ ∠AOC. Show that ∠POQ = 90°.

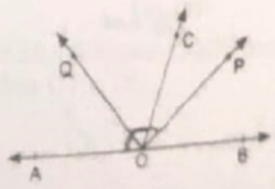


Fig. 6.39

Ch 4 Assignment H.HW
Cl. IX

the figure given below, triangle AOB with co-inates of A and O as (4, 0) and (0, 0), AB = 5. d the coordinates of B.

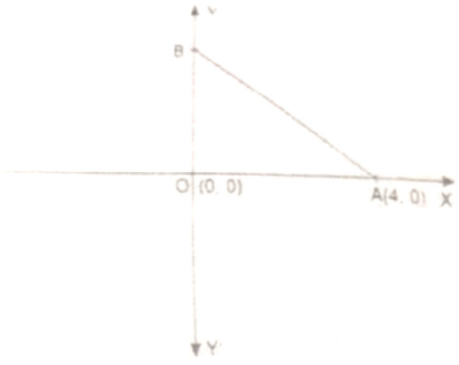


Fig. 4.24

e following table gives the number of pairs of oes and their corresponding prices. Plot these as dered pairs and join them. What type of graph do u get?

Number of pairs of shoes	1	2	3	4	5	6
orresponding prices (in hundred rupees)	5	10	15	20	25	30

ints A(5, 3), B(– 2, 3) and D(5, – 4) are three rtices of a square ABCD. Plot these points on graph paper and hence find the coordinates of rtex C. *[NCERT Exemplar]*

lot the following points in the coordinate plane: 3, 1), Q(8, 1), R(8, – 3) and S(3, – 3). What type figure do you get by joining the points P, Q, R nd S?

lark the points A(2, 2), B(2, – 2), C(– 2, – 2) and – 2, 2) on a graph paper and join these points in rder. Identify the figure so obtained. Also, find the rea of the figure.

ind the area of the triangle whose vertices are (0, 4),), 0) and (2, 0) by plotting them on graph.

hree vertices of rectangle are (3, 2), (– 4, 2) and – 4, 5). Plot these points and find the co-ordinates f the fourth vertex. *[NCERT Exemplar]*

lot the following points:

Points / Co-ordinates	P	Q	R	S	T	U
x	-1	0	6	3	– 3	6
y	3	3	3	0	2	– 3

Long Answer Type Questions — 4–6 Marks

1. If the coordinates of a point M are (– 2, 9) which can also be expressed as $(1 + x, y^2)$ and $y > 0$, then find in which quadrant do the following points lie:
   P(y, x), Q(2, x), R(x^2, y – 1), S(2x, – 3y).
2. (i) Plot the points M(5, – 3) and N(– 3, – 3).
   (ii) What is the length of MN?
   (iii) Find the coordinates of points A, B and C lying on MN such that
   MA = AB = BC = CN.
3. Find the coordinates of the vertices of a rectangle placed in III quadrant, in the cartesian plane with length 'p' units on x-axis and breadth 'q' units on y-axis.
4. Plot the points P(– 1, – 1), Q(2, 3) and R(8, 11). Show that they are collinear.
5. Plot the points A(5, 5) and B(– 5, 5) in cartesian plane. Join AB, OA and OB. Name the type of triangle so obtained.
6. Plot the points A(2, 3), B(2, 1), C(0, 1) and D(0, 3). Join the points and identify the figure obtained. Find its area and perimeter.
7. In the given figure, ABCD is a rhombus with diagonals AC = 16 cm and BD = 8 cm. Find the coordinates of A, B, C and D.

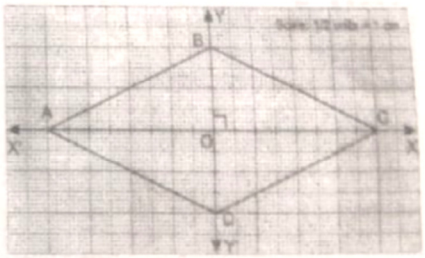
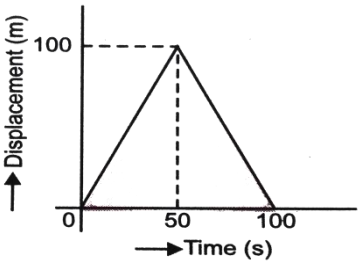


Fig. 4.25

8. Plot the points A(0, 3), B(5, 3), C(4, 0), and D(– 1, 0) on the graph paper. Identify the figure ABCD and find whether the point (2, 2) lies inside the figure or not.
9. Write the coordinates of the vertices of a rectangle whose length and breadth are 4 units and 3 units respectively, has one vertex at the origin, the longer side is on the x-axis and one of the vertices lies in the IVth quadrant. Also, find its area.
10. Plot the points A(– 3, – 3), B(3, – 3), C(3, 3) and D(– 3, 3) in the cartesian plane. Also, find the length of line segment AB.

Physics

1) Draw velocity time graph when an object is speeding up?
2) An object starting from rest travel 20 m in first 20 s and 160 m in next 4 s. what will be the velocity after 7 s from the start.
3) A girl walks along a straight path to drop a letter in the letter box and comes back to her initial position. Her displacement-time graph shows in figure. Plot a velocity time graph for the same



4) A scooter starts from rest moves in a straight line with a constant acceleration and covers a distance of 64 m in 4 s.
5) A truck is moving on a straight road with uniform acceleration. The following table gives speed of truck at varies instant of time.

Speed (ms^{-1})	5	10	15	20	25	30
Time (s)	0	10	20	30	40	50

Draw the speed-time graph by choosing convenient scale. Determine for it.
   i) Acceleration of truck
   ii) The distance travelled by truck in 50 s.
6) A motor bike running at 5 m/s, picks up a velocity of 30 m/s. calculate acceleration and distance covered during acceleration.
7) A train 100 m long is moving with a velocity of 60 km/h. find the time to covers the bridge 1 km long.
8) An athlete completes one round of circular track of diameter 49 m in 2 s. calculate the distance and displacement at end of 30 s.
9) The Brake applied to a car produce an acceleration of 6 m/s^2 in the opposite direction of motion. If the Car take 2 s to stop after application of the Brake, calculate the distance it travelled during this time.
10) A truck running at 90 km/h is brought to rest over a distance of 25 m. calculate the retardation and time for which brake was applied.
11) A motor bike running at 90 km/h is slowed down to 18 km/h in 2.5 s. calculate: -
   i) Acceleration
   ii) Distance covered in the time it slows down.
12) A cyclist travelling at 5 m/s picks a velocity of 10 m/s over distance 50 m. calculate
   (a) Acceleration
   (b) Time in which cyclist picks up above velocity.
13) A motor car slow down from 72 km/h to 36 km/h over at distance of 25 m. if the brakes are applied with the same force. Calculate
   (a) Total time in which car comes to rest.
   (b) Distance travelled by it.
14) A motor bike running at 90 km/h is slowed down to 54 km/h by application of brake over distance of 40 m. if brake is applied with same force, then calculate
   (a) Total time in which bike came to rest.
   (b) Total distance travelled by bike.