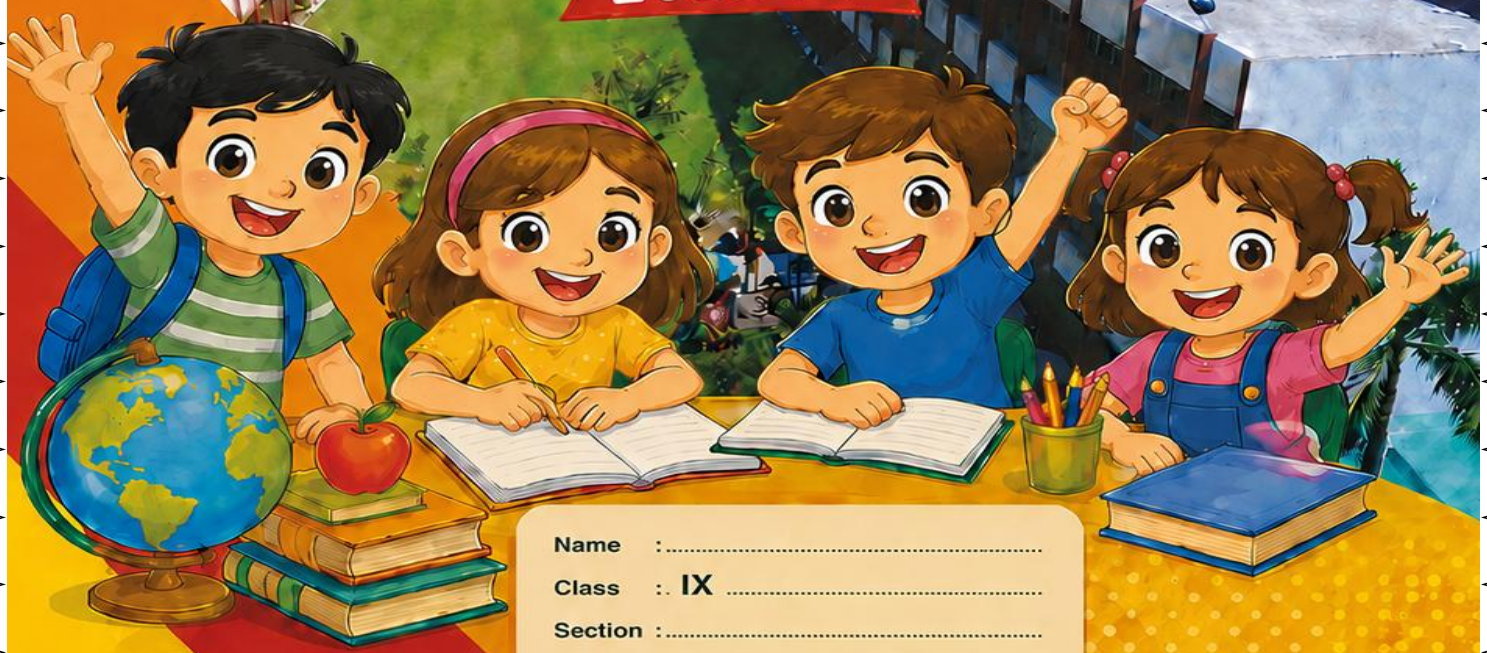
Estd. 1994

SANT NISCHAL SINGH PUBLIC SCHOOL

LADWA

CLASS IX SUMMER HOLIDAYS' HOMEWORK

2026-27



Name :.....

Class :. IX .....

Section :.....

Roll No. :.....

"Learning gives creativity, creativity leads to thinking, thinking provides knowledge, and knowledge makes you great."

GENERAL INSTRUCTIONS

- ☑ Use neat handwriting.
- ☑ Avoid overwriting.
- ☑ Submit work on time.
- ☑ Use colored headings.
- ☑ Add borders and illustrations.
- ☑ Keep all sheets clean and properly arranged

ENGLISH

ENGLISH PORTFOLIO

Every Student Must Prepare ONE Portfolio File

✨ Keep it neat, creative, and colourful.

Suggested Pages

S.No	Topic
1	My Goal
2	Peer Assessment
3	Self Assessment
4	Target
5	My Strength
6	My Weakness

SUBJECT ENRICHMENT ACTIVITY

Complete the Following Pages of BBC

- 📖 Module 1
- ➡ Page No. 3 to 20
- 📖 Module 9
- ➡ Page No. 394, 395, 399, 403, 404, 429, 430
- 📖 Module 10 – Listening Task
- ➡ Page No. 468 to 475

Roll No. 1 – 11

ART INTEGRATED WORK

Write the biography of any TWO famous poets with:

- Photographs
- Famous works
- Achievements
- Contribution to literature

Decoration Idea: Draw books, feathers, ink pots, flowers, or poetry scrolls.

❖ Make an Attractive Mind Map of Chapter -**The Pot Maker**

Roll No. 12 – 22
ART INTEGRATED WORK
Prepare a colourful project on traditional dance of Telangana with:
- Pictures Costumes
- Origin
- Importance
- Dance features

Decoration Idea: Use mirror-work patterns, rangoli designs, and colourful borders.

❖ Make an Attractive Mind Map of Poem - **Gifts of Grace : Honouring Our Vocations**

Roll No. 23 – 33
ART INTEGRATED WORK
Famous Celebrities of Telangana
Write about any TWO famous personalities with:
- Photographs
- Achievements
- Awards
- Contribution to society

Decoration Idea: Add medals, stars, trophies, and sports-themed borders.

❖ Make an Attractive Mind Map of Poem - Bharat Our Land

Mind Map must Include :
✨ Characters. ✨ Theme. ✨ Moral. ✨ Important Events. ✨ Vocabulary. ✨ Message of the Lesson

Use:
• Arrows. • Clouds. • Colours. • Symbols • Sketch Pen

Social Science:

Task 1: Reading

Read and Revise the notes of Chapters done in class and make 10 MCQ from each Chapter

Task 2: The Tectonic Time-Traveller (Interdisciplinary Math/Geo)

Tectonic plates move at an average speed of approximately 2.5 cm to 5 cm per year.

* Calculation: Using the speed of 4cm/year, calculate how many meters a plate would move in:

i) 500 years ii) 1,000 years iii) 1,000,000 years (1 million years)

Task3: Disaster Management Blueprint (Life Skills)

Prepare a "Family Emergency Plan" for a natural disaster common in your region (e.g., Earthquake, Flood, or Heatwave).

* Create a Leaflet: Include a list of "Do's and Don'ts."

* The Go-Bag: List 10 essential items you would pack in an emergency kit.

* Contact Tree: Design a simple flowchart showing who to contact (Emergency services, neighbours, relatives).

Task 4: Art Integrated: Pairing States(Haryana and Telangana)

Landforms & Livelihoods (Socio-Economic Study)

Pick one of the following landforms of Pairing states: Mountains, Plains, or Coastal Areas. Research and create a Visual Collage or a 2-page Report covering:

* Occupations: How do people earn a living there? (e.g., terrace farming vs. fishing).

* Challenges: What natural risks do they face?

* Culture: How does the landform influence their food and clothing?

Submission Guidelines:

* Format: Use an A4 size sheets and submit all the tasks in one project file.

* Creativity: Use colours, maps, and newspaper clippings to make your work visually appealing.

* Authenticity: Hand-written work is preferred to reflect your personal observations.

Enjoy your holidays and keep exploring!

SCIENCE

Art Integrated Project

Crop patterns and local agricultural tools used in Sikkim and Maharashtra

Make working model on any one the following topic:-

Seed Germination Experiment
Electric Motor
Acid-Base Indicator
Rainwater Harvesting Model
Simple Circuit
Photosynthesis Model
Magnetic Levitation
Microbial Fuel Cell

Subject Enrichment Activity

Assignment 1

1. Vishnu swims in a 90m long pool. He covers 180m in one minute by swimming from on end to the other and back along the same straight path. Find the average speed an average velocity of Vishnu.
2. A particle is moving in a circle of diameter 5m. Calculate the distance covered and th displacement when it competes 3 revolutions.
3. A body thrown vertically upwards reaches a maximum height 'h'. It then returns t ground. Calculate the distance travelled and the displacement.
4. A body travels a distance of 15m from A to B and then moves a distance of 20m at rigl angles to AB. Calculate the total distance travelled and the displacement.
5. An object is moving in a circle of radius 'r'. Calculate the distance and displacement (when it completes half the circle (ii) when it completes one full circle.
6. An object travels 16m in 4s and then another 16m in 2s. What is the average speed the object?
7. In a long distance race, the athletics were expected to take four rounds of the track suc that the line of finish was same as the line of start. Suppose the length of the track wa 200m.

(a) What is the total distance to be covered by the athletics?

(b) What is the displacement of the athletics when they touch the finish line?

(c) Is the motion of the athletics uniform or non-uniform?

(d) Is the displacement of an athletic and the distance covered by him at the end of th race equal?

8. Starting from a stationary position, Bhuvan paddles his bicycle to attain a velocity 6m/s in 30s. Then he applies brakes such that the velocity of bicycle comes down t 4m/s in the next 5s. Calculate the acceleration of the bicycle in both the cases.
9. The odometer of a car reads 2000 km at the start of a trip and 2400km at the end of th trip. If the trip took 8 hr, calculate the average speed of the car in km/hr and m/s.
10. A body is moving with a velocity of 15m/s. If the motion is uniform, what will be th velocity after 10s?

11. A train travels some distance with a speed of 30km/hr and returns with a speed o 45km/hr. Calculate the average speed of the train.

12. A train 100m long moving on a straight level track passes a pole in 5s. Find

(a) the speed of the train

(b) the time it will take to cross a bridge 500m long.

13. A car travels along a straight line for first half time with speed 40km/hr and th second half time with speed 60km/hr. Find the average speed of the car.

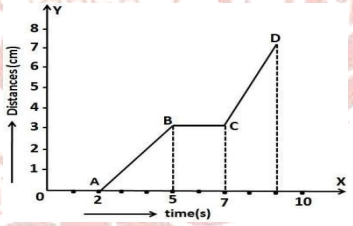
14. A body starts rolling over a horizontal surface with an initial velocity of 0.5m/s. Du to friction, its velocity decreases at the rate of 0.05m/s^2. How much time will it take fo the body to stop?

15. A car traveling at 36km/hr speeds upto 70km/hr in 5 seconds. What is it acceleration? If the same car stops in 20s, what is the retardation?

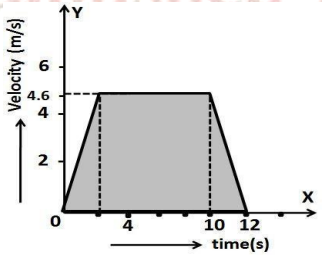
16. On a 120km track, a train travels the first 30 km at a uniform speed of 30 km/h How fast must the train travel the next 90 km so as to average 60 km/hr for the entir trip?

17. A train travels at 60 km/hr for 0.52 hr; at 30 km/hr for the next 0.24 hr and at 7 km/hr for the next 0.71 hr. What is the average speed of the train?

18. The graph in below figure shows the positions of a body at different times Calculate the speed of the body as it moves from (i) A to B (ii) B to C and (iii) C to D.



19. The velocity time graph of an ascending passenger lift is given below. What is the acceleration of the lift: (i) during the first two seconds (ii) between 2nd and 10th second (i during the last two seconds.



20. A body is moving uniformly with a velocity of 5m/s. Find graphically the distance travelled by it in 5 seconds.

i) Study the speed-time graph of a body shown in below figure and answer the following questions:

(a) What type of motion is represented by OA?

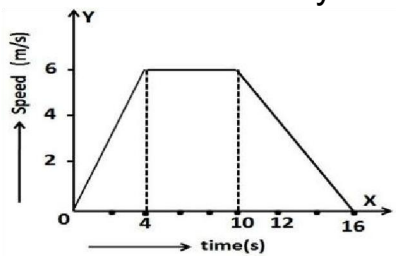
(b) What type of motion is represented by AB?

(c) What type of motion is represented by BC?

(d) Calculate the acceleration of the body.

(e) Calculate the retardation of the body.

(f) Calculate the distance travelled by the body from A to B.



21. In the above question, calculate (i) distance travelled from O to A (ii) distanc travelled from B to C. (iii) total distance travelled by the body in 16 sec.

22. A body is accelerating at a constant rate of $10m/s^2$. If the body starts from rest, ho much distance will it cover in 2 seconds?

23. An object undergoes an acceleration of $8m/s^2$ starting from rest. Find the distanc travelled in 1 second.

24. A moving train is brought to rest within 20 seconds by applying brakes. Find th initial velocity, if the retardation due to brakes is $2m/s^2$.

25. A car accelerates uniformly from 18km/h to 36 km/h in 5 seconds. Calculate (acceleration and (ii) the distance covered by the car in that time.

26. A body starts to slide over a horizontal surface with an initial velocity of 0.5 m/ Due to friction, its velocity decreases at the rate of $0.05\ m/s^2$. How much time will it tak for the body to stop?

27. A train starting from the rest moves with a uniform acceleration of $0.2\ m/s^2$ for minutes. Calculate the speed acquired and the distance travelled in this time.

28. A bus was moving with a speed of 54 km/h. On applying brakes, it stopped in seconds. Calculate the acceleration and the distance travelled before stopping.

29. A motor cycle moving with a speed of 5 m/s is subjected to an acceleration of 0. m/s^2. Calculate the speed of the motor cycle after 10 seconds and the distance travelle in this time.

30. The brakes applied to a car produce an acceleration of $6\ m/s^2$ in the opposit direction to the motion. If the car takes 2 seconds to stop after the application of brake calculate the distance it travels during this time.

31. A train starting from rest attains a velocity of 72 km/h in 5 minutes. Assuming tha the acceleration is uniform, find (i) the acceleration and (ii) the distance travelled by th train for attaining this velocity.

32. Calculate the speed of the tip of second's hand of a watch of length 1.5 cm.

33. A cyclist goes once round a circular track of diameter 105m in 5 minutes. Calculat his speed.

34. A cyclist moving on a circular track of radius 50m complete revolution in 4 minute What is his (i) average speed (ii) average velocity in one full revolution?

35. The length of minutes hand of a clock in 5 cm. Calculate its speed.

36. A car starts from rest and moves along the x-axis with constant acceleration 5m/s for 8 seconds. If it then continues with constant velocity, what distance will the car cove in 12 seconds since it started from the rest?

Assignment 2

1. Where are chromosomes located in a cell? How are they important to us?
2. Give one function of RER and SER.
3. What will happen if the cellular organisation is destroyed due to some physical and chemical means?
4. Mention any two function of nucleus.
5. Why are lisosomes called" suicidal bags of the cell"?
6. (i) Why do we soak chana in water overnight? (ii) Name the phenomena involve in this process. (iii) Name another food that can be soaked in this way.
7. What is the similarity and dissimilarities between mitochondria and chloroplast? What will happen to a RBC when it is placed in a hypertonic solution?
8. Differentiate between plant and animal cell.
9. Give differences between ribosomes and centrosomes.
10. What are genes?
11. Differentiate between Mitosis and Meiosis.
12. Differentiate between Chloroplast ,Chromoplast and Leucoplast.
13. Write a short note on packaging cell organelle.
14. Draw a well labelled diagram of eukaryotic nucleus. How is it different from nucleoid?
15. Plant cell, in addition to the plasma membrane, have another rigid covering calle the cell wall. The cell wall lies outside the plasma membrane. The plant cell wall mainly composed of Cellulose Cellulose is a complex substance and provide structur strength to the plants. When a living plants loses water through osmosis, there is shrinkage or contraction of the content of the cell away from the cell wall. Th phenomena is known as plasmolysis.

1.Which of the following is the main constituent of cell?

(a) Proteins (b) Lipids (c) lipoproteins (d) cellulose

2 Which of the following is outermost covering of the plant cell

(a) Cell membrane (b) plasma membrane (c) cell wall (d) cellulose

16. Define Plasmolysis.
17. Why is ATP called energy currency of the cell?
18. Which factor determines the shape and size of cell?
19. What is gene?
20. What is lacking in a virus which makes it depend on living cell to multiply? Give reason.
21. Draw a labelled diagram of a prokaryotic cell.
22. Which cell organelle is called power house of the cell? why
23. Why is Plasma Membrane called a selective permeable membrane and Cell Wall is called as fully permeable membrane?
24. Which cell organelle, you think, is known as "Head Quarter" of the cell and why? 3 What is the nuclear region of the prokaryotic cells called?
25. Where is Ribosomes synthesized? State the function of this organelle.
26. What will happen to an animal cell if placed in the hypertonic solution?
27. Name the only cell organelle seen in prokaryotic cell.
28. What is plasmolysis?
29. Why does the skin of your finger shrink when you wash clothes for a long time?
30. Name any three organelles with double membranes.
31. Name the mechanism by which substances like Carbon-di-Oxide and Water move in and out of the cell? Discuss.
32. Which plastid is responsible for yellow and other colours in petals of flower?
33. Where from a lysosome arise?
34. Which cell organelle synthesis lipids?
35. How many membranes are present in vacuole?
36. Name an organelle without a cell membrane.
37. What would happen to the life of a cell if there was no Golgi apparatus?
38. What do you mean by membrane biogenesis? Mention the organelle involved in it?
39. State one similarity and one difference between mitochondria and plastid.
40. Name the control room of the and show its components.
41. Why cell is known as the structural and functional unit of living organisms?

HINDI

1. एक कला एकीकृत परियोजना तैयार कीजिए!(Art Integrated project)

वि◌षय -तेलंगाना राज्य, तेलंगाना की लोक संस्कृति, खानपान!

2. साहित्यकार परिचय-(Creative project)रैदास हिंदी के प्रसिद्ध कवि की जीवनी उनकी रचनाएं और साहित्य उनके योगदान पर सचित्र फाइल तैयार कीजिए!

3. लेखन कौशल और पठन- (writing and Reading skill)आप अपनी पाठ्य पुस्तक हिंदी कहानी संवादहीन पढे और उसके मुख्य पात्र तथा कहानी के संदेश पर लगभग 100 शब्दों में समीक्षा लिखिए!

4. गतिविधि-(Activity Based)प्रेमचंद की कहानी(दो बैलों की कथा) के संवादों को लिखकर एक छोटा सा वीडियो तैयार करें!

सामान्य निर्देश- 1.पोर्टफोलियो आपके द्वारा लिखा हुआ हो!(प्रिंट निकला हुआ नहीं)

2. परियोजना कार्य हेतु फाइल तैयार करें ध्यान रखें फाइल प्लास्टिक

HEALTH & EDUCATION

1) Introduction and Importance of Health
2) Sports injuries (any 5)
3) SEWA -: •Introduction
   • Objectives
   • Guidelines for students

(Practical file)

1) Track :- draw diagram and write marking of the track
2) Write and draw any one field event – Throwing event or Jumping event
3) Write and draw about any one Favourite Game - Team game/individual game
4) Write and draw about Yoga Asana - any five (standing, sitting and laying)

ARTS

Draw following topics in Art Files with colours with the help of book :

Two still life study
Two Landscape
One Nature Study
One Folk Art (From Unit 7 of book)

MATHS

NUMBER SYSTEM

1. The product of any two irrational numbers is:
   A) always an irrational number
   B) always a rational number
   C) always an integer
   D) Sometimes rational, Sometimes irrational.

2. Between two rational numbers:
   A) there is no rational number
   B) there is exactly one rational number
   C) there are infinitely many rational numbers
   D) there are only rational numbers and no irrational numbers

3. Which of the following is an irrational number?
   A) 7/8. B) 0.333... C) √2. D) 0.25

4. Every rational number is:
   A) Whole number B) Natural number C) Integer D) Real Number

5. The decimal representation of the rational number is:
   A) Always terminating
   B) Either terminating or repeating
   C) Either terminating or non-repeating
   D) Neither terminating nor repeating

6. Find three rational numbers between 5/7 and 6/7

7. Represent the following numbers on the number line:
   i) √5 ii) √2. iii) √3

8. Prove that √5 is an irrational number.

9. Prove that 5 - 2√3 is an irrational number.

10. Convert $0.1\bar{6}$ into the form p/q

11. Convert $2.45\overline{37}$ into the form p/q

12. If x/3 + x/5 = 16/15 find the rational number x.

13. Rationalise the denominator of 1 / (7 + 3√3)

14. Find the value of a and b in the following: (5 + 2√3) / (7 + 4√3) = a - b√3

15. Simplify $16^{(-1/4)} \times \sqrt[4]{16}$

16. What is the value of √4 × √81 + 2√3 + √27

17. Simplify $(\sqrt{5} + 2\sqrt{7})^2$

18. Calculate the value of (11^(1/2)) / (11^(1/3))

19. The value of $a^b + b^a$ if a = 2 and b = 3

20. Simplify $\sqrt[3]{1331} - \sqrt{100} + \sqrt{81}$

POLYNOMIALS

1. The degree of the polynomial $3x^3 - x^4 + 5x + 3$ is
   A) 3 B) -4. C) 4. D) 1

2. If $P(x) = 5x^2 - 3x + 7$, then P(1) equals to
   A) -10. B) 9. C) -9. D) 10

3. In $(\pi x^2)/2 + x + 10$, the Coefficient of x^2 is:
   A) π/2. B) 1. C) -π/2. D) -1

4. Which of the following is a term of a Polynomial?
   A) 2x. B) 3/x. C) x^√x. D) √x

5. x + 1/x is
   A) a polynomial of degree 1
   B) a polynomial of degree 2
   C) a polynomial of degree 3
   D) not a polynomial

6. What is the Coefficient of x^3 and Constant term in the polynomial $7x^3 + 5x^2 - 3x - 8$

7. Riya is 5 years older than her brother. The sum of their ages is 25 years. Find their ages.

8. The perimeter of a rectangle is 32 cm. Its length is five less than twice its breadth. Find the length and breadth.

9. 3/4 of a number is more than 4/5 of the number by 5. Find the number.

10. A water tank contains 500 litres of water. Every hour, 25 litres are used. How much water wil remain after 1, 2, 3... hours? Find a linear expression for the amount of water left after the n-t hour.

11. An auto-rikshaw fare starts at Rs 25 and remains the same for the initial 2 km. Then it is increased by Rs 15 per km. What will be the fare for a travel of 3, 4, 5... km? Find a linear expression for the total fare for a travel of n-th km.

12. A candle is 15 cm long and burns down by 1.2 cm every hour.
    i) Find its length after 6 hours.
    ii) Make a table of values for t varying from 0 to 10
    iii) Find the linear expression relating candle length L and time t.

13. A child is 4 feet tall and grows 0.25 feet every year.
    i) Find the height after 5 years.
    ii) Make a table for t = 0 to 10
    iii) Find the expression relating height h and years t.

14. An internet cafe charges a fixed entry fee and an hourly usage fee. A customer pays Rs 180 fc 2 hours and Rs 300 for 6 hours. Find the linear equation relating bill y and hours x, according to relation y = ax + b find the values of a and b.

15. A food delivery app charges a fixed delivery fee and an amount per item ordered. A custome pays Rs 350 for 5 items and Rs 470 for 9 items. If the customer bill y depends on number of items x, according to the relation y = ax + b find the values of a and b.

16. A taxi service charges a fixed fee plus a charge per kilometre travelled. A passenger pays Rs 220 for 8 km and Rs 320 for 13 km. If the taxi charges y depends on kilometre travelled x, according to the relation y = ax + b, find the values of a and b.

17. If we multiply a number by 5/2 and add 2/3 to the product, we get -7/12. Find the number.

18. Sarita is reading a book of 300 pages. She reads 10 pages every day. How many pages will be left after 12 days? Express this as a linear pattern.

19. Draw the graph of following sets of lines. Reflect the role of 'a' and 'b'. y = 2x - 1, y = 2x + 1, y 2x + 5

20. Draw the graph of following equations and identify their slopes and y-intercepts.
    i) y = 3x + 4
    ii) 2y = 4x + 7

PROJECT & ACTIVITY

PROJECT:

Compare and find Area & Volume of any three monuments of Haryana and Telangana.

ACTIVITY:

Do following activities in Lab Manual:

1. Making of Square Root Spiral

2. Algebraic Identity 1

3. Factorisation of Trinomials

4. Quadrants and Coordinates 1

5. The Midpoint Theorem