

**DAYANAND MODEL SCHOOL**  
**Class IX – Session 2025–26**  
**Summer Holiday Homework**

**ENGLISH**

**A) BEEHIVE – Read and revise**

**L-1 THE FUN THEY HAD**

**L-2 THE SOUND OF MUSIC**

**Poem –1)THE ROAD NOT TAKEN**

**2)WIND**

**MOMENTS –**

**L-1 THE LOST CHILD**

**L-2 THE ADVENTURES OF TOTO**

**Write the summary of above lessons and poem on A-4 size sheet (120–150 words each) .**

**Add creative illustrations to reflect the key ideas.**

**B) Write a story in about 120-150 words. Given below is an outline of the story given in the form of phrases. Complete the story using hints (A-4 size Sheet)**

**Nathu Ram was a cap-seller..... sold caps and earned his bread .....one afternoon sleeping under a tree .....put his bundle of caps aside..... all monkeys living on the tree stole his caps.....**

**C ) Complete the story in 120-150 words which begins as the following :**

**Once upon a time, there lived a king in a palace. He was very handsome and smart but he was a great fool. One day, he announced that..... .. (A-4 size Sheet)**

**D) Write an article in about 200–250 words on the following topic (A-4 size Sheet)**

**Topic: “The Role of Healthy Habits in a Student’s Life”**

**Taking ideas from the hints given below.**

**Hints**

**Importance of physical health, sleep, and balanced diet**

**Role of time management and daily routine**

**Limiting screen time and staying active**

**Impact of healthy habits on concentration, learning, and mood**

**Tips for students to maintain a healthy lifestyle**

**Submission Instruction:**

**Combine above listed A-4 size sheet work into a well-decorated Holiday Homework File with your name, roll number, and subject clearly labeled on the cover page.**

**E. Prepare a Vocabulary Book having minimum five words of each alphabet (new words) and draw or paste small pictures/illustrations for at least one word per alphabet and explain the meanings in english. Also design a beautiful cover page for the vocabulary book and put a bookmark with a motivational quote on it**

## **F. Art-Integrated Cultural Project (CBSE Mandate – Ek Bharat Shreshtha Bharat)**

**Topic: “Discovering the Culture of Sikkim”**

**Prepare a Project File on the Union Territory of Sikkim covering:**

**Tourism:** Famous places like Tsomgo Lake, Gangtok, Nathula Pass

**Religion & Monasteries:** Buddhism, Rumtek Monastery

**Traditional Dance Forms:** Maruni, Singhi Chaam

**Cuisine:** Momos, Thukpa, Phagshapa

**Folk Music & Instruments:** Cultural songs, musical traditions

**Festivals:** Losar, Saga Dawa

**Language & Costumes:** Lepcha, Bhutia, and Nepali influence

**Art and Craft:** Thangka painting, bamboo crafts

**Famous Personalities:** Baichung Bhutia (footballer), Sonam Wangyal (mountaineer)

**Integrate visual or performing art in your project:**

**Add photos, handmade drawings, or small pieces of traditional artwork**

**Write a short poem or a travelogue on Sikkim to integrate English learning with cultural research**

## **Science**

### **1. Physics Project Report**

**Topic:** Application of Newton’s Laws of Motion in Daily Life

**Task:** Explain Newton’s 3 Laws of Motion with 3 real-life examples (one for each law)

**Format:** Handwritten or typed (A4) | **Length:** 2–3 pages

### **2. Biology Chart**

**Task:** Draw and label Plant Cell & Animal Cell

**Instructions:** A4 sheet, colored drawing preferred

### **3. Art Integrated Project**

**Theme:** Science & Heritage Walk through Sikkim and Puducherry

**Activity:** Tri-fold Brochure (A4)

**Content:**

**Sikkim:** 2 scientific facts + 2 cultural facts

**Puducherry:** 2 scientific facts + 2 cultural facts

**Include drawings/printed pictures**

## **Social Science**

**Handwritten project to be submitted physically by 01/07/2025. All the projects are compulsory.**

**Project 1- Every student has to compulsorily undertake a project on ‘ANY ONE’ topic of Disaster Management. The topics are as follows:**

**1. Earthquake**

**2. Floods**

**3. Cyclone**

**4. Industrial Disaster**

**5. Fire hazards.**

**Project report must contain following sub-topics:**

**General information, definition and its types**

**Major causes**

**Effects**

**Pre and Post Disaster Mitigation measures to be adopted**

**Prepare an Evacuation plan, if you face the same at your home/apartment/ locality/ school**

**Prepare 3 slogans/ a poster as part of the awareness programme in your school/locality.**

**Following are the guidelines for the project:-**

**1. The project report can be handwritten or digital and credit will be awarded to original drawings, illustrations and creative use of materials.**

**2. The handwritten project report will be presented in a neatly bound simple folder or scrap book.**

**In case of a digital project, it will be presented through Google Slides/Powerpoint Presentation/Google Doc.**

**3. The total length of the project report should not be more than 8-10 A-4 size sheets/10-12 slides/pages.**

**4. The project report should be framed in the following order:**

**\* Cover page showing project title, student information, school and year.**

**\* List of contents with page numbers.**

**\* Acknowledgements (acknowledging the institution, offices and libraries visited and persons who have helped).**

**\* Introduction**

**\* Background and Summary**

**\* Conclusions based on your findings.**

**\* Bibliography: Should have the name of the author and the book referred to, and in case of a website the name of the website must be mentioned.**

**\* All the photographs and sketches should be labeled.**

### **Art Integrated Activity**

**Project 2. Prepare Scrap book on the different Economic Activities performed by the people of Sikkim (R -1 to 14). Pondicherry (R-15 onwards).**

**Project 3. History of Sikkim divided into three different phases –**

**1.Establishment of Namgyal dynasty 2.British incursion in Sikkim 3.Democratic Sikkim**

**Project-4 (a) Write a brief business plan for handicraft Industry. (In A-4 Sheet)**

**(b) Make a short newspaper report on Brazil's struggle to have "Democracy".(In A-4 Sheet)**

**Q Revise the syllabus done till now in a thin notebook.**

**Q Write a report on Natural disaster (earthquake) which currently took place in Thailand.**

## IT

Project- 10 marks (to be prepared on a scrapbook)

Gestures can be some of the most direct and obvious body signals for visual communication. Find out some common gestures and their possible meaning using images. (e.g covering mouth, rubbing hands, eye rub etc.)

Art Integrated Project (Use LibreOffice writer app or Canva)

Roll no. 1 to 15- Design a travelogue on places to visit in Pondicherry . Share your file to [bhartidms82@gmail.com](mailto:bhartidms82@gmail.com)

Roll no. 16 onwards- Design a travelogue on places to visit in Sikkim. Share your file to [bhartidms82@gmail.com](mailto:bhartidms82@gmail.com)

## MATHEMATICS

### WORKSHEET 1

#### NUMBER SYSTEM

##### Multiple Choice Questions

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. The value of  $1.999\dots$  in the form  $\frac{p}{q}$ , where p and q are integers and  $q \neq 0$ , is:  
(A)  $\frac{19}{10}$       (B)  $\frac{1999}{1000}$       (C) 2      (D)  $\frac{1}{9}$
3.  $2\sqrt{3} \times \sqrt{3} + 1$  is equal to :  
(A)  $2\sqrt{9}$       (B) 6      (C) 7      (D)  $4\sqrt{6}$
4. 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
5. which of the following is equal to x?

(A)  $x^{\frac{12}{7}} - x^{\frac{5}{7}}$       (B)  $\sqrt[12]{(x^4)^{\frac{1}{3}}}$       (C)  $(\sqrt{x^3})^{\frac{2}{3}}$       (D)  $x^{\frac{12}{7}} \times x^{\frac{7}{12}}$

### Short Answer Type Questions

6. Find the three rational numbers between:

- (i) -1 and -2      (ii) 0.1 and 0.11      (iii)  $\frac{5}{7}$  and  $\frac{6}{7}$       (iv)  $\frac{1}{4}$  and  $\frac{1}{5}$

7. Represent geometrically the following numbers on the number line:

- (i)  $\sqrt{4.5}$       (ii)  $\sqrt{5.6}$       (iii)  $\sqrt{8.1}$       (iv)  $\sqrt{2.3}$

8. Simplify  $16^{\frac{-1}{4}} \times \sqrt[4]{16}$

9. Find the value of x in  $3 + 2^x = (64)^{\frac{1}{2}} + (27)^{\frac{1}{3}}$ .

10. If a = -2, b = -1, then find  $a^{-b} - b^a$ .

### Long Answer Type Questions

11. If  $x = \frac{\sqrt{3}-\sqrt{2}}{\sqrt{3}+\sqrt{2}}$  and  $y = \frac{\sqrt{3}+\sqrt{2}}{\sqrt{3}-\sqrt{2}}$ , find the value of  $x^2 + y^2 + xy$ .

12. If  $x = \frac{2-\sqrt{5}}{2+\sqrt{5}}$  and  $y = \frac{2+\sqrt{5}}{2-\sqrt{5}}$ , find the value of  $x^2 - y^2$ .

13. Determine rational numbers p and q if

$$\frac{7+\sqrt{5}}{7-\sqrt{5}} - \frac{7-\sqrt{5}}{7+\sqrt{5}} = p - 7\sqrt{5}q.$$

14. Simplify:  $\frac{6}{2\sqrt{3}-\sqrt{6}} + \frac{\sqrt{6}}{\sqrt{3}+\sqrt{2}} - \frac{4\sqrt{3}}{\sqrt{6}-\sqrt{2}}$ .

15. Simplify:  $\frac{3\sqrt{2}}{\sqrt{6}-\sqrt{3}} + \frac{2\sqrt{3}}{\sqrt{6}+2} - \frac{4\sqrt{3}}{\sqrt{6}-\sqrt{2}}$ .

16. Show that:  $\frac{1}{3-\sqrt{8}} - \frac{1}{\sqrt{8}-\sqrt{7}} + \frac{1}{\sqrt{7}-\sqrt{6}} - \frac{1}{\sqrt{6}-\sqrt{5}} + \frac{1}{\sqrt{5}-2} = 5$

17. If:  $x = \frac{\sqrt{p+q} + \sqrt{p-q}}{\sqrt{p+q} - \sqrt{p-q}}$ , then find the value of  $qx^2 - 2px + q$ .

18. Show that:  $\frac{x^{-1}+y^{-1}}{x^{-1}} + \frac{x^{-1}-y^{-1}}{x^{-1}} = \frac{x^2+y^2}{xy}$

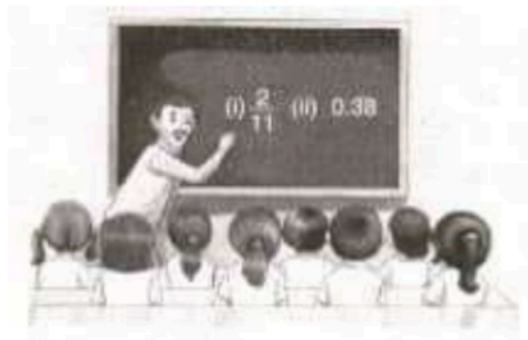
19. If  $x = 2 + 3\sqrt{2}$ , then find the value of  $\left(x + \frac{14}{x}\right)$ .

20. Find the value of a and b in the following:

(i)  $\frac{5+2\sqrt{3}}{7+4\sqrt{3}} = a - b\sqrt{3}$

(ii)  $\frac{\sqrt{2}+\sqrt{3}}{3\sqrt{2}-2\sqrt{3}} = a + b\sqrt{6}$

21. To judge the preparation of student's class IX on topic "Number System" Mathematics teachers write two numbers on black board (as shown in figure), and asks some questions about the members, which are following, then answer the question:



- (i) Write the decimal form of  $2/11$
- (ii) Write the p/q form of 0.38.  
Write the decimal expansion of  $2/11$ .
- (iii) If p/q form of 0.38 is m/n, then find the value of (m + n)

## WORKSHEET 2

### POLYNOMIALS

#### Multiple Choice Questions

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. If  $\frac{x}{y} + \frac{y}{x} = -1$ , ( $x, y \neq 0$ ), then the value of  $x^3 - y^3$  is  
(A) 1 (B) -1 (C) 0 (D)  $\frac{1}{2}$
4. The remainder when  $f(x) = x^3 - 2x^2 + 6x - 2$  is divided by  $(x - 2)$ , is  
(A) 5 (B) 8 (C) -10 (D) 10
5. If  $(x + 1)$  and  $(x - 1)$  are the factors of  $f(x) = ax^3 + bx^2 + cx + d$ , then  
(A)  $a + b = 0$  (B)  $b + c = 0$  (C)  $b + d = 0$  (D)  $a + d = 0$

### **Short Answer Type Questions**

6. If  $f(x) = 2x^3 - 15x^2 + 15x + 2$ , find  $f(2)$  and  $f(-3)$ .
7. If  $x = 2$  is a root of the polynomial  $f(x) = 2x^2 - 3x + 7a$ , find the value of  $a$ .
8. Check whether the polynomial  $f(x) = 4x^3 + 4x^2 - x - 1$  is a multiple of  $2x + 1$ .
9. If  $x + 1$  is a factor of the polynomial  $2x^2 - kx$ , then find the value of  $k$ .
10. Find the coefficient of  $x^2$  in  $(x^2 - 2)^3$ .
11. Find the value of (using identity only) i)  $249^2 - 248^2$       ii)  $95 \times 96$ .

### **Long Answer Type Questions**

12. Expand :  
i)  $\left(\frac{1}{x} + \frac{y}{3}\right)^3$   
ii)  $\left(4 - \frac{1}{3x}\right)^3$
13.  $x + \frac{1}{x} = 3$ , find the value of  $x^2 + \frac{1}{x^2}$  and  $x^3 + \frac{1}{x^3}$ .
14. If  $x - 2y = 11$  and  $xy = 8$ , find the value of  $x^3 + 8y^3$ .
15. If  $p(x) = x^3 + 3x^2 - 2x + 4$ , find the value of  $p(-2) + p(1) + p(0)$ .
16. If  $a + b + c = 6$  and  $ab + bc + ca = 11$ , find the value of  $a^3 + b^3 + c^3 - 3abc$ .
17. Using identities, find the product of  
i)  $(x + 1)(x - 1)(x^2 + 1)(x^4 + 1)$ .  
ii)  $\left(x - \frac{y}{5} - 1\right)\left(x + \frac{y}{5} - 1\right)$ .
18. Rationalise the denominator and simplify:  
$$\frac{2\sqrt{6} - \sqrt{5}}{3\sqrt{5} - 2\sqrt{6}}$$
19. Simplify  
$$\frac{\sqrt{5} + \sqrt{3}}{\sqrt{5} - \sqrt{3}} + \frac{\sqrt{5} - \sqrt{3}}{\sqrt{5} + \sqrt{3}}$$
20. Find the value of  $\frac{6}{\sqrt{5} - \sqrt{3}}$ , it being given that  $\sqrt{3} = 1.732$  and  $\sqrt{5} = 2.236$ .

21. On one day, principal of a particular school visited the classroom. Class teacher was teaching the concept of polynomial to students. He was very much impressed by her way of teaching. To check, whether the students also understand the concept taught by her or not, he asked various questions to students. Some of them are given below. Answer them.



- i) Find the value of  $a$ , when  $x + 1$  is a factor of  $x^3 - 2ax^2 + 16$ .
- ii) Find the value of  $k$ , when  $x - 1$  is a factor of  $4x^3 - 3x^2 - 4x + k$ .
- iii) How many zeroes are there in the polynomial  $x^2 + 4x + 2$ .

### ART INTEGRATED PROJECT:

- Give a brief introduction of the STATE.
- Write a brief description on the climatic conditions and topography of Sikkim/ Pondicherry
- In Tabular format, write the following-
  - i) Month wise highest and lowest temperatures ( $^{\circ}\text{C}$ ) for 5 months (March 2024 to July 2024)
  - ii) Precipitation/ rainfall for 7 months (August 2024 to Feb 2024)
- Use the above information to prepare i) a double bar graph showing the highest and lowest temperatures in Sikkim / Pondicherry on a graph sheet. Use coloured paper strips to represent bars.
  - ii) a line graph showing the precipitation/rainfall in Sikkim/ Pondicherry on a graph sheet.

### हिंदी

नोट- संपूर्ण गृह कार्य स्वच्छ व व्यवस्थित ढंग से पूर्ण कीजिए । सभी कार्य सुन्दर लेख में पूर्ण कीजिए ।

कक्षा में करवाए गए प्रश्न उत्तर व अभ्यास कार्य याद कीजिए ।

1. आधुनिक काल के किन्हीं 2 कवियों का जीवन परिचय और एक - एक कविता भी लिखिए ।
2. हिंदी व्याकरण :- अनुस्वार, अनुनासिक और नुक्ता वाले 20 - 20 शब्दों को लिखिए व चित्र भी चिपकाइए (हिंदी कॉपी में)
3. शरीर के अंग से संबंधित मुहावरों का संकलन कीजिए और चित्र भी चिपकाएँ या बनाए ।

कोई 10 मुहावरों का अर्थ लिखकर वाक्य में प्रयोग कीजिए ।



4. राष्ट्रीय गान , राष्ट्रीय गीत , राष्ट्रीय ध्वज के विषय में महत्वपूर्ण जानकारी चित्रात्मक रूप में लिखिए | A4 sheet

5. संचयन के पहले दो पाठ को अच्छे से पढ़कर उनका सार लिखिए |

परियोजना कार्य (Project Work) on A4 SHEET

सिक्किम के कल्चर हिंदी में और सिक्किम की पूरी जानकारी एकत्रित कर के लिखिए और चित्र भी चिपकाएँ।

सिक्किम के मुख्य निर्मित उत्पादों के प्रयोग व प्रसार के लिए आकर्षक विज्ञापन पत्रावली बनाइए। (Brochure)

1. सिक्किम का भूगोल Geography of Sikkim with the help of map

2. राज्य में पर्यटन Tourism in the state ( मानचित्र में दर्शाइए )

3. सिक्किम के उत्सव Festivals of Sikkim

4. सिक्किम की संस्कृति Culture of Sikkim

5. सिक्किम के भाषा Sikkim language

6. गरम पानी के झरने hot waterfalls