



ADARSH PUBLIC SCHOOL

HOLIDAYS' HOMEWORK (2026-27)

CLASS: X



GENERAL INSTRUCTIONS:

- All the questions are compulsory.
- The holidays' homework must be done in a very neat and presentable manner.
- The child will be assessed on the basis of presentation, neatness, completion of all the given questions and timely submission.
- Revise all the syllabus covered in the class.
- The homework of all subjects is to be done in respective notebooks or as specified and to be submitted on 1st July 2026.
- Project work of all subjects to be done as mentioned and submitted to the class teacher in a clear bag with proper Name, Class & Roll No.

ENGLISH

I. Do questions 1 to 4 in English Grammar notebook.

1. You are Arjun Mehta, the School Captain of Greenfield Public School, Mumbai. Your school library needs to be restocked with books for the annual reading programme for Class IX and X students. Write a letter to the Manager of National Book House, Pune, placing an order for the following books:
 - *The Diary of a Young Girl* by Anne Frank — 25 copies
 - *Wings of Fire* (Autobiography of A.P.J. Abdul Kalam) — 30 copies
 - *A Short History of Nearly Everything* by Bill Bryson — 20 copies
 - *Rich Dad Poor Dad* by Robert Kiyosaki — 20 copiesThe following points must be stated in the letter:
 - A clear list of books with author names and quantities.
 - A request for the latest available editions only.
 - An inquiry about any bulk purchase discount or special institutional pricing.
 - A request for proper laminated packaging to avoid damage during transit.
 - Mention that payment will be made via NEFT/online transfer within 2 days of delivery.
 - A request for delivery within 10 working days, along with an invoice and delivery challan.
2. Write a letter to the Editor of The Times of India expressing your views on corruption in public life. You are Sahil Dutt of E-1/300, Model Town, Delhi-110009
3. Answer the following questions in 80 to 100 words:
 - a) Do you think Lencho's faith in God was justified? Explain with reference to the story, 'A Letter to God'.
 - b) How do the chapters- 'Nelson Mandela: Long Walk to Freedom' and 'Two Stories about Flying' highlight courage and determination? Explain with examples.

4. Find the error in each line and write the correction in the space provided.

	Error	Correction
a) Last Sunday, I go to the market	—	— and buy
some fruits.	—	—
While I was returned,	—	—
I see an old man who was asking for help.	—	—
I helps him to cross the road.	—	—
b) Yesterday, we was going to the park	—	— when it
start raining heavily. Everyone	—	—
run here and there to find shelter, but	—	—
I decides to stay under a tree. My	—	—
friend tell me that it is not safe,	—	—
but I do not listen to him. After	—	—
some time, the rain stop and	—	—
we goes back home happily.	—	—

II. ART INTEGRATED PROJECT

Design a 5-fold brochure that highlights the rich culture, history, and natural heritage of Lakshadweep. Ensure your brochure is informative, visually appealing, and captures the essence of Lakshadweep's diverse maritime heritage. Your brochure should focus on the following key topics:

- **Historical Significance:** Mention important historical events and facts about Lakshadweep (e.g., ancient Arab trade routes, Portuguese colonisation, the islands' integration into India as a Union Territory in 1956).
- **Cultural Heritage:** Showcase Lakshadweep's traditional arts, music, dance forms such as *Kolkali*, *Parichakali*, and *Oppana*, and festivals like Eid celebrated across the islands.
- **Tourist Destinations:** Highlight popular spots such as Agatti, Bangaram, Kavaratti, Minicoy, and Kalpeni islands.
- **Cuisine:** Introduce traditional dishes and seafood specialties popular in Lakshadweep, such as *Mas Curry*, *Tuna Pattichathu*, and coconut-based delicacies.
- **Marine & Natural Heritage:** Explore Lakshadweep's contribution to India's ecological wealth — its coral reefs, lagoons, and rich marine biodiversity.
- **Famous Personalities:** Include notable figures from Lakshadweep such as P.P. Mohammed Faizal (Member of Parliament) and highlight the islands' connection to ancient Islamic scholars and traders.

हिंदी

निर्देश: प्रश्न 1 से 3 व्याकरण की उत्तर पुस्तिका में करें तथा प्रश्न 4 व परियोजना कार्य ए-4 साइज शीट्स पर करें।

1. निम्नलिखित विषयों पर 100 शब्दों में अनुच्छेद लिखिए।
क कृत्रिम बुद्धिमत्ता (AI) का बढ़ता उपयोग तथा युवाओं पर इसका प्रभाव
ख 'परिवार में बुजुर्गों का महत्व'
2. अपने बैंक के प्रबंधक को अपने आधार कार्ड को बैंक खाते से जोड़ने का अनुरोध करते हुए 100-120 शब्दों में पत्र लिखिए।
3. आप विद्यालय के हिंदी विभाग के अध्यक्ष हैं। हिंदी दिवस के अवसर पर आयोजित होने वाली प्रतियोगिताओं में भाग लेने के लिए सभी विद्यार्थियों को आमंत्रित करते हुए 50 से 60 शब्दों में सूचना तैयार कीजिए।
4. मैथिलीशरण गुप्त का जीवन परिचय देते हुए उनकी प्रमुख रचनाओं, भाषा-शैली तथा साहित्यिक विशेषताओं का वर्णन चित्र सहित कीजिए। अपने कार्य को 4-5 [ए-4 साइज] शीट्स पर प्रस्तुत करें।
कला एकीकृत परियोजना
लक्षद्वीप एवं अंडमान-निकोबार द्वीप समूह की संस्कृति व रहन-सहन पर आधारित एक आकर्षक सचित्र परियोजना पाँच [ए-4 साइज] शीट्स का प्रयोग करते हुए तैयार कीजिए।

MATHEMATICS

I. Do the assignment in Maths Register

1. If α and β are the zeroes of the quadratic polynomial $5x^2 - 7x + 1$, find a quadratic polynomial having 2α and 2β as its zeroes.
2. If α and β are zeroes of the polynomial $9x^2 - 5x - 4$, then find the values of
a) $\alpha + \beta - \alpha\beta$ b) $(2\alpha + 2\beta)/3\alpha\beta$ c) $\alpha^2 + \beta^2$
3. Find the zeroes of the quadratic polynomial and verify the relationship between zeroes and its coefficients.
a) $x^2 + 2\sqrt{2}x - 6$ b) $5x^2 - 7x - 12$.
4. Prove that $\sqrt{3} + \sqrt{5}$ is an irrational number.
5. Find the value of x and y for the following pair of equations
a) $148x + 231y = 527$, $231x + 148y = 610$
b) $ax + by = a - b$, $ax - by = a + b$
6. From the top of a building 75m high the angle of elevation from the top of the tower is found to be 30° . From the bottom of the same building, the angle of the elevation of the top of the tower is found to be 60° . Find the height of the tower and the distance between the tower and building.
7. The horizontal distance between two towers is 90 m. The angular depression of the top of the first tower as seen from the top of the second tower which is 180m high is 45° . What will be the height of the second tower?
8. Prove the following identities:
a) $\sec A (1 - \sin A) (\sec A + \tan A) = 1$
b) $\tan^2 \Theta + \cot^2 \Theta + 2 = \sec^2 \Theta \operatorname{cosec}^2 \Theta$
c) $(1 - \sin \Theta + \cos \Theta)^2 = 2 (1 + \cos \Theta) (1 - \sin \Theta)$

9. Find the value of k for which the following pair of linear equations have infinitely many solutions. $2x + 3y = 7$, $(a+b)x + (2a-b)y = 21$.
10. a) Draw the graph for linear equations $x+3y=6$, $2x-3y-12=0$. Using this graph, find the vertices and area of the triangle formed by these lines and y -axis.
- b) Represent graphically that the system of linear equations $2x-2y=2$ and $4x -4y =10$ is inconsistent.

II. MULTIPLE ASSESSMENT ACTIVITY

Draw the concept map of linear equations in two variables on A-4 size sheet.

Refer this link (https://youtu.be/iUL7x52PzNY?si=HIPC8EpSz_ZMCLyW) draw the concept map of pair of linear equations in two variables on A4 size sheet.

III. Prepare an Art Integrated Project on the “Applications of Trigonometry” based on the beautiful landscapes and monuments of Andaman and Nicobar Islands. Include following points in it.

- Collect information about the geographical beauty and famous places of Andaman and Nicobar Islands such as beaches, islands, bridges, forests and viewpoints.
- Choose any one famous location of Andaman and Nicobar Island and imagine yourself measuring its height or distance using trigonometry.
- Draw a neat labelled diagram and apply the concept of trigonometric ratios to calculate height and distance of the object/place from observation point.
- Decorate the project creatively using drawings or sketches of traditional art patterns of Andaman and Nicobar Island.
- Write a short note on use of trigonometry is useful in real life for measuring heights and distances.

SCIENCE

I. Do the following questions in Science Register.

- ‘The small intestine is highly coiled.’ Explain how this structure is advantageous for digestion and absorption.
- A student uses a convex lens to read small letters. Explain how the lens helps and what type of image is formed.
- If stomata remain closed for a long time, what consequences will it have on the plant? Explain.
- A student performs two experiments:
 - Heating lead nitrate
 - Electrolysis of acidulated water

Both produce gases. Compare the type of reactions involved. Explain how would you chemically identify each gas.

5. Why does a swimming pool appear shallower than it actually is? Explain using ray diagram.
6. Why is sodium hydrogen carbonate an alkaline salt? List its two important uses.
7. A spherical mirror produces an image of magnification -1 on a screen placed at a distance of 50 cm from the mirror.
 - a) Write the type of mirror.
 - b) Find the distance of the image from the object.
 - c) What is the focal length of the mirror?
 - d) Draw the ray diagram to show the image formation in this case.
8. Ram was doing an experiment in the Chemistry lab. The teacher told him to heat 1g of Cu in a test tube. He observed that the colour of the copper turns from brown to black. When Hydrogen gas is passed over it again, it changes to brown colour.
 - a) Name the type of reaction involved.
 - b) Name the black colour substance formed.
 - c) Write the balanced chemical reactions.
9. During science class, the teacher explains haemodialysis as a life saving procedure for patients with kidney failure.
She mentions that it involves a semi permeable membrane and dialysis fluid.
 - a) What is the role of the semi permeable membrane in haemodialysis?
 - b) Why is dialysis fluid used?
 - c) What type of waste products are removed from patient blood during haemodialysis?
 - d) How is dialysis different from the natural kidney in terms of its functioning?

II. PROJECT WORK

Present the work as mentioned according to the roll number on the format prescribed.

Roll No.1-15

Let your creativity shine! Feel free to experiment with editing techniques, collage layouts, or any other artistic elements that enhance the presentation of your work. Experiment with different angles, lighting conditions, and subjects to showcase the phenomenon effectively. You can arrange them in a visually appealing manner, accompanied by captions or brief descriptions explaining the science behind each image.

Topic Selection: Choose one or more Science concepts (reflection, refraction, Tyndall effect, dispersion, or image formation) to explore through photography. You can focus on a single concept or combine multiple concepts in your photographs. Submit your printed work on A3 or A2 photo paper with a brief description on A-4size sheet.

Roll No 16-30

Make an investigatory project report on “Diabetes mellitus” emphasizing the following points.

(i) Diabetes mellitus and its cause, (ii) Symptoms of the disorder, (iii) Precautionary measures, (iv) Treatment of the disorder, (v) A case study

Instructions: (i) Write the project report on A4 size sheet in your own hand writing,

(ii) Paste concerned colourful pictures, cuttings from magazines and newspapers, data etc.

Roll No- 31-40

Innovation and change go hand in hand. The most crucial way to empower change is to transform the way we think and more importantly revolutionize the way we learn. Magicians have been using the scientific principles of optics to create illusions that we call 'magic tricks'. Use mirrors or lenses to prepare a fun game/toy or demonstrate a magic trick/optical illusion. Use any optical phenomenon to prepare the same on A-4size sheet and prepare a short verbal presentation to demonstrate the same. The optical illusion/ game/ toy must be presented aesthetically.

III. MULTIPLE ASSESSMENT

On A4 size yellow sheets draw the defective and corrective diagram for defects of vision along with their causes using waste material like bangles, matchsticks, stones etc.

SOCIAL SCIENCE

I. Answer the following questions and write them in the register:

- a) What are final goods and intermediate goods? How do they help in calculating Gross Domestic Product (GDP)?
- b) Explain any three ways to solve the problem of underemployment.
- c) Why has the shift out of the primary sector not occurred in terms of employment, even though there has been a change in the share of the three sectors in GDP?
- d) How can we create more employment in the secondary and tertiary sectors in rural India?
- e) 'There are several things needed by the society as a whole'. In the light of this statement, explain who can provide these at a reasonable cost- the private or the public sector and why?
- f) 'Belgium shifted from a unitary to a federal form of government'. What key changes were brought in the political system under the above mentioned shift?
- g) 'Federations are contrasted with unitary governments'. Explain by giving examples from Sri Lanka and Belgium.
- h) Mention any two subjects which are included in the Union List. Explain by giving reasons why these are included in the Union List.
- i) 'Do you consider decentralization as a means to minimize the conflicts?' Give your viewpoint.
- j) How do dams create conflicts among people?

II. Map Work:

On the political map of India, locate and label the following and paste the maps in Cartographic File. (Use separate maps for all questions)

- a) Major Soil types found in India with appropriate colors.
- b) Major Dams: Salal, Bhakra Nangal, Tehri, Rana Pratap Sagar, Sardar Sarovar, Hirakud, Nagarjuna Sagar and Tungabhadra.

III. Make an informative project on the theme 'My Role as a Responsible Consumer in

Today's Market'. Refer to the link <https://www.youtube.com/watch?v=n-hc5ZvGwmY&t=20s>

The project should be done on A4 size sheets and include flowcharts, diagrams and supportive newspaper cuttings.

Add the following points in the Project:

- a) Who are Consumers?
- b) How Consumers are being exploited?
- c) 'Six consumers' rights with illustrations (poster, cartoon, newspaper clipping).
- d) Duties of an alert Consumer
- e) Prepare a T chart, write the '**responsibilities as a consumer**' on one side and '**role as a consumer**' on the other side.
- f) Explain any one: Laws protecting consumers- COPRA 2021, FSSAI, Legal Metrology Act, BIS Act.
- g) Role of organizations and explain their working for consumer rights with examples.

IV. ART INTEGRATED PROJECT

Prepare a report of 8-10 pages on A4 size sheets on the Cultural, Historical and Environmental Study of Andaman and Nicobar Islands.

- a) Comparative study of resources, development, tourism, and governance of Delhi and Andaman and Nicobar Islands.
- b) Research on freedom struggle connection through the Cellular Jail.
- c) Analyze the challenges of sustainable development in island regions.

ARTIFICIAL INTELLIGENCE

Do the following questions in AI notebook.

1. Read the following paragraph and answer the following questions:

A company in the e-commerce industry implemented a Natural Language Processing (NLP)-powered chatbot to handle customer service inquiries. The chatbot was trained using a large dataset of customer queries and responses, allowing it to understand common issues like order tracking, returns, and refunds. It used NLP techniques such as intent recognition and named entity recognition to identify the customer's request and provide relevant answers. Over time, the chatbot's ability to understand and respond improved through machine learning, reducing customer wait times and enhancing overall customer satisfaction.

- a) How did the e-commerce company use NLP to improve its customer service?
- b) What types of customer queries could the NLP-powered chatbot handle?
- c) What NLP techniques were mentioned in the case study for processing customer inquiries?
- d) How did machine learning contribute to the chatbot's performance over time?
- e) What was the impact of implementing the chatbot on customer satisfaction?

2. Read the following paragraph and answer the following questions:

A leading retail chain implemented computer vision to enhance store operations. Using AI-powered cameras, they analyzed customer movements, product interactions, and shelf inventory in real-time. The system detected when shelves were empty and alerted staff to restock, reducing missed sales opportunities. It also identified customer preferences by tracking which products received the most attention. Additionally, facial recognition helped improve security by identifying known shoplifters from a database. Over six months, the retail chain increased sales by 15% and improved operational efficiency.

- a) How was computer vision used to monitor inventory in the retail chain?
- b) Explain how facial recognition contributed to improving store security.
- c) What role did customer movement analysis play in enhancing operations?
- d) What other potential applications of computer vision can be used in retail?
- e) A digital assistant giving answer in speech by responding to a voice command is an example of which AI domain?

Do the following code on Python and paste the screenshot of code and output on A4 sheet and attach it into the AI File.

- a) Calculate 3% discount on the amount entered by the user and display the output as: The discount on <<amount>> is <<amount after discount>>.
- b) Raj has a grassland on his farm house in a perfect circular shape. Accept circumference of the grassland and calculate its area. Circumference is double of radius and area of circle is calculated as $3.14 * \text{radius} * \text{radius}$.
- c) Write a Python program to print "Hello World".
- d) Write a Python program to add two numbers entered by the user.
- e) Write a Python program to check whether a number is even or odd.
- f) Write a Python program to find the largest of two numbers.
- g) Write a Python program to print the multiplication table of a number.

WORK EDUCATION

Make a short video of 5 minutes or PowerPoint presentation of 15 slides on Water Pollution covering the following points:

- a) Meaning
- b) Causes and ways to prevent it
- c) Techniques to conserve water

ART

- a) Make an attractive Mosaic Art using coloured Papers, cardboard, Stones , shells etc as shown in Art Book (Pg 99, 100)
- b) Make a Beautiful Knife Painting using Acrylic Colours as shown in Art Book (Pg 82, 83).
- c) Create an Art work inspired by scenic beauty of Andaman and Nicobar Island on A3 size sheet

Note : Draw and colour any two artworks of your choice , on A3 size sheets.