

HOLIDAY HOMEWORK
SUMMER VACATION (08.05.2026 to 16.06.2026)
CLASS – X
SCIENCE

HOLIDAY HOMEWORK CLASS 10TH

- Collect a concave mirror from a shop and record different observations of image making and record readings as demonstrated in class.
- (Use a concave mirror easily available in a craft shop, a candle, a screen as a white paper.) Make a video of any observation and prepare a link. Upload in the following link.

https://docs.google.com/spreadsheets/d/1gfn8w1Htje_-eB1ym9jl6-OdE-OY1xti4MmvGOPIWg0/edit?usp=drivesdk

- Make a working model for working of lungs by using a bottle, pipe ,and balloon to show how lungs help in breathing and respiration.

Teacher- Asmita Malik
Tgt science

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CLASS – X
SOCIAL SCIENCE

1. Do Map practice of History and Geography.
2. “Money in your pocket cannot buy all the goods and services that you may need to live well.” Justify the statement with example.
3. What are the different forms of power sharing in modern democracies? Give an example of each of these.
4. Write the Ethnic composition of Belgium and Sri Lanka.

5. What criteria does UNDP compare to measure the human development index? Explain.
6. Briefly trace the process of German and Italy unification.
7. What steps did the French revolutionaries take to create a sense of collective identity among the French people? Write any five.
8. Learn and revise all the completed chapters. (Economics, History and Civics)
9. Briefly trace the geographical and ethnic variations of the Balkans region. Why did this region become politically very explosive?
10. What was the main aim of the Treaty of Vienna 1815? What were the main provisions of the Treaty of Vienna held in 1815?
11. Make a project on sustainable development roll no 1 to 11 consumer rights roll no 12 to 23 social issues roll no 24 to last roll no

केन्द्रीय विद्यालय मुज़फ्फरनगर (प्रथम पाली) **ग्रीष्मकालीन अवकाश गृहकार्य**

विषय – हिन्दी **कक्षा – दस**

- ❖ पढ़ाए गए पाठ्यक्रम को पढ़ें व याद करें तथा नोटबुक में पूर्ण करें।
- ❖ अपनी पाठ्यपुस्तक से किसी एक लेखक और एक कवि के विषय में परियोजना कार्य A4 साइज पेपर पर बनाएं।
- ❖ पाठ्यक्रम से सम्बन्धित व्याकरण कार्य को समझे तथा नोटबुक में करें।
- ❖ 'जल बचाओ जीवन बचाओ' विषय पर चित्र सहित स्लोगन A4 साइज पेपर पर तैयार करें।
- ❖ ग्रीष्मकालीन अवकाश आप कैसे बिताएंगे? विषय पर A4 साइज पेपर पर अनुच्छेद लिखें।
- ❖ विद्यालय पत्रिका के लिए स्वरचित लेख, कविता A4 साइज पेपर पर लिखें।
- ❖ अपनी सेहत का ध्यान रखें और धूप में बाहर जाने से बचें।

नोट- उपर्युक्त गृहकार्य एक फोल्डर में रखकर विद्यालय खुलने पर अध्यापक के पास जमा करें।

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CLASS – X
YOGA

- 1- Write the introduction of Yoga. Briefly describe about the history of yoga and types of yoga.
- 2- What are our ancient texts (like Patanjali yoga sutra, Shrimad Bhagwat Gita & Upanishad) through about the yoga.
- 3- Describe the Surya namaskar along with its mantras.
- 4- Write about the Dhanurasana & Chakrasana along with their benefits and precautions.
- 5- Describe about the Bhramari & Bhastrika pranayam with their benefits and precautions.
- 6- Write about the method of Jalneti Kriya, its benefits and precautions.

HOLIDAY HOMEWORK
SUMMER VACATION (08.05.2026 to 16.06.2026)
CLASS – X

SUBJECT: ARTIFICIAL INTELLIGENCE

- Q1.** Write difference between Rule based approach and Learning based approach with example. Also write advantages and disadvantages of Rule based approach and Learning based approach
- Q2.** Write features of machine learning and deep learning with example.
- Q3.** Differentiate Supervised Learning, Unsupervised Learning and Reinforcement Learning with example.
- Q4.** Write difference between supervised learning and unsupervised learning.
- Q5. Explain in detail**
 - (i) Subcategories of supervised learning model
 - (ii) Subcategories of unsupervised learning model
- Q6. Define with features and application**

- (i) Artificial Neural Network (ANN)
- (ii) Convolutional Neural Networks (CNN)

HOLIDAY HOMEWORK

Mathematics | Session 2026-27

Class 10th

Syllabus: Real Numbers, Polynomials, Linear Equations

I. PRACTICE PROBLEMS

1. Find the largest number which divides **70** and **125**, leaving remainders **5** and **8** respectively.
2. Show that **$5 - \sqrt{3}$** is irrational.
3. Find the **HCF** and **LCM** of **404** and **96** and verify that **$HCF \times LCM = \text{Product of the two numbers}$** .
4. If the zeroes of the quadratic polynomial **$x^2 + (a + 1)x + b$** are **2** and **-3**, then find the values of **a** and **b**.
5. Find a quadratic polynomial whose zeroes are **$3 + \sqrt{2}$** and **$3 - \sqrt{2}$** .
6. If **α** and **β** are zeroes of **$3x^2 - 6x + 4$** , find the value of **$(\alpha/\beta + \beta/\alpha) + 2(1/\alpha + 1/\beta) + 3\alpha\beta$** .
7. Solve for **x** and **y**: **$10/(x+y) + 2/(x-y) = 4$** and **$15/(x+y) - 5/(x-y) = -2$** .
8. Determine the values of **m** and **n** for which the following system of linear equations has infinite solutions: **$(2m-1)x + 3y - 5 = 0$** and **$3x + (n-1)y - 2 = 0$** .
9. A fraction becomes **$1/3$** when **1** is subtracted from the numerator and it becomes **$1/4$** when **8** is added to its denominator. Find the fraction.
10. Find the quadratic polynomial whose sum of zeroes is **0** and one zero is **3**.
11. Check if the graph of **$y = x^2 - 4x + 4$** touches the x-axis. If yes, at which point?
12. Using prime factorization, find the **HCF** of **144** and **198**.
13. Solve graphically: **$2x - y = 2$** and **$4x - y = 8$** . Write the coordinates of the vertices of the triangle formed by these lines and the y-axis.

14. If $x = a$, $y = b$ is the solution of equations $x - y = 2$ and $x + y = 4$, then find the values of a and b .
15. Write the condition for which the pair of linear equations $ax + by = c$ and $lx + my = n$ has a unique solution.
16. Find the remainder when $p(x) = x^3 - 3x^2 + 4x + 50$ is divided by $(x - 3)$.
17. If the **HCF** of **65** and **117** is expressible in the form $65m - 117$, find the value of m .
18. Find the zeroes of the quadratic polynomial $\sqrt{3}x^2 + 10x + 7\sqrt{3}$.
19. Is the system $2x + 3y = 7$ and $6x + 5y = 11$ consistent? Justify.
20. A father's age is three times the sum of the ages of his two children. After 5 years his age will be two times the sum of their ages. Find the father's present age.

II. PROJECT WORK

Activity 1: Parabolic Exploration

- Search for 3 architectural structures that use parabolic arches (e.g., bridges, monuments) and paste their pictures.
- Explain the mathematical reason why the cable in a suspension bridge takes a parabolic shape.

Activity 2: Practical Activity (Math Art)

Task: Graphing Lines and Polynomials

1. On a graph paper, plot the equations $x - y + 1 = 0$ and $3x + 2y - 12 = 0$.
2. Shade the triangular region formed by these lines and the x-axis.
3. Calculate the area of this shaded triangle.

(Reminder: $\text{Area} = \frac{1}{2} \times \text{base} \times \text{height}$)

III. COMPETENCY BASED QUESTIONS

1. **Case Study 1:** A school library has 36 books in Section A and 48 books in Section B. Find the minimum number of books required so that they can be distributed equally among students of either section.

2. **Case Study 2:** The cost of 2 pencils and 3 erasers is Rs. 9, and the cost of 4 pencils and 6 erasers is Rs. 18. Represent this graphically and state if the solution is unique or infinite.
3. Find the zeroes of $p(x) = 2x - 6$ graphically and verify it algebraically.
4. A ball's flight path is $p(x) = -x^2 + 2x + 8$. Find the distance between the points where the ball touches the ground.
5. Prove that 15^n cannot end with digit 0 using the Fundamental Theorem of Arithmetic.
6. A boat covers 30 km upstream and 44 km downstream in 10 hours. Formulate the linear equations to find the boat's speed.
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Wish you a happy and productive summer break!

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SUMMER VACATION (08.05.2026to16.06.2026)
SUBJECT: ENGLISH
CLASS 10

Be Curious, Be Creative and Do Your Best!

1. Prepare a Portfolio of Your Own

Include the following:

- Your name, class, section, and roll number
- Passport size photograph
- Personal details (hobbies, strengths, goals, achievements)
- Favourite book/author
- Learning goals for the year
- Self-introduction

2. Make Mind Maps of the Following Chapters/Poems

Chapters/Poems:

1. *A Letter to God*
2. *Dust of Snow*
3. *Fire and Ice*
4. *A Tiger in the Zoo*
5. *A Triumph of Surgery*
6. *Nelson Mandela: Long Walk to Freedom*

Include in Each Mind Map:

- Theme
- Characters
- Summary
- Important Message
- Literary Devices (for poems)

3. Write Five Analytical Paragraphs

Write one paragraph each based on:

- Bar Graph
- Pie Chart
- Flow Chart
- Survey Report
- Tabular Data / Comparative Data

Each Paragraph Should Include:

- Introduction
- Key Observations
- Comparison
- Conclusion

4. Prepare One Worksheet Each on Grammar Topics

Topics:

- Tenses
- Modals
- Determiners

Each Worksheet Should Contain:

- Fill in the blanks
- Multiple choice questions
- Error correction
- Sentence transformation

5. Value Based Questions

(A) Based on *A Letter to God*

You have read about Lencho in *A Letter to God*.

- How has the story of Lencho moved you?
- What do you think about Lencho's faith in God and his attitude towards the officials in the post office?
- Discuss his actions and write in your own words why he does so.

(B) Based on *Nelson Mandela: Long Walk to Freedom*

Discuss the significance of freedom for human beings and its role in the advancement of humankind and civilization as outlined in the lesson *Nelson Mandela: Long Walk to Freedom*.

"Education is the most powerful weapon which you can use to change the world." — Nelson Mandela