

MOUNT COLUMBUS SCHOOL

NEW DELHI

2026-27

SUMMER VACATION

★ HHW ★



Stay Hydrated

Drink plenty of water and stay fresh!



Eat Healthy

Have fruits, salads and light meals.



Stay Protected

Wear a hat, sunglasses and use sunscreen.



Keep Learning

Read books, learn new things and explore!



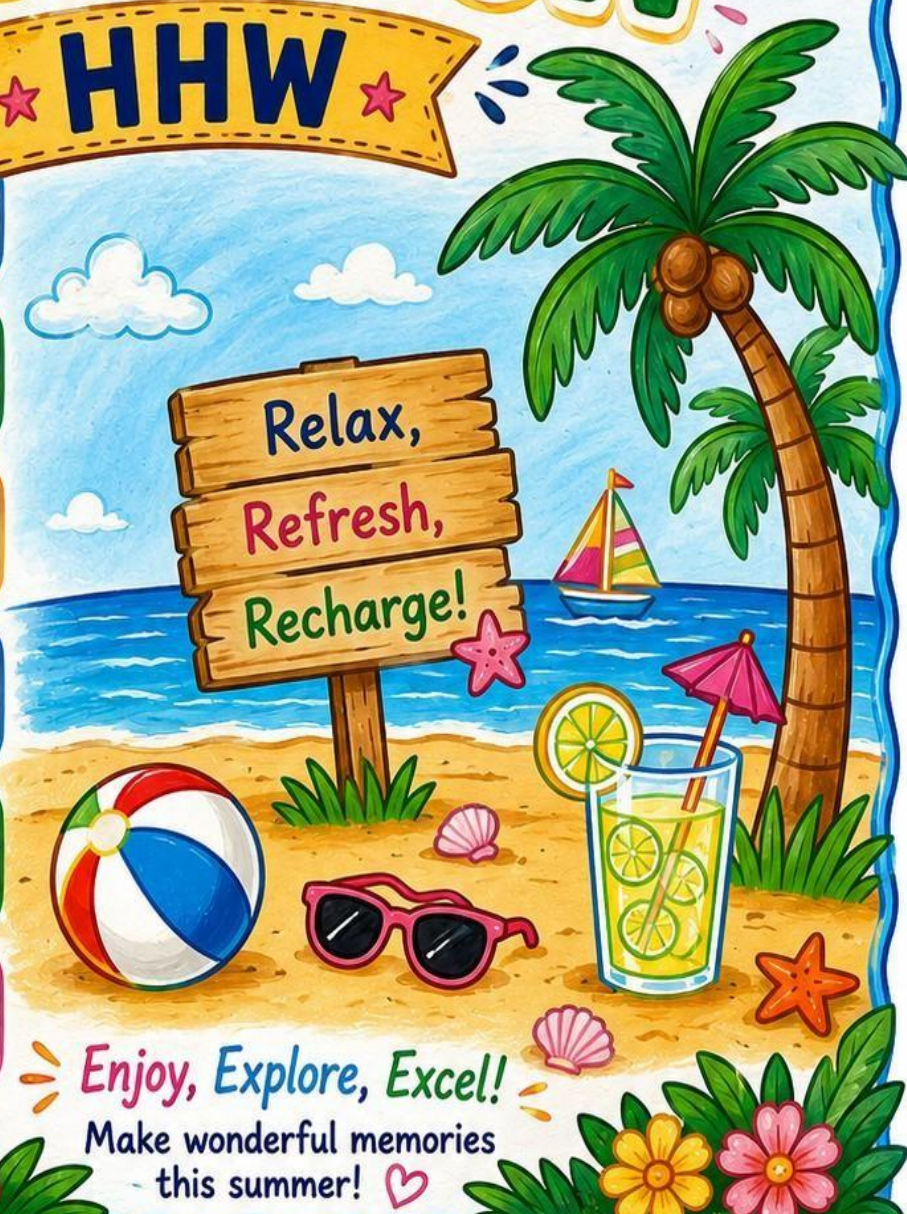
Stay Active

Play indoor games, do yoga and exercise.



Be Kind

Help others, spend time with family and friends.



Relax,

Refresh,

Recharge!

Enjoy, Explore, Excel!

Make wonderful memories
this summer! ♥



CLASS – X

ENGLISH

1. **EK BHARAT SHRESHTHA BHARAT (EBSB)** - Create a Travel Brochure – “Explore Sikkim: The Crown of Northeast India”. Include the following pointers:-

- Location
- Ways to reach
- Weather
- Best time to visit
- Hotels & stay options
- Flora & fauna
- Famous food

2. **MULTILINGUISM** - “Traditional Dress & Culture of Kerala” Poster

Make a poster showing **traditional dress and cultural elements of Kerala** and label them in **Malayalam**.

3. **ART INTEGRATED** – Design a poster on the topic “The voice of their vocation is the voice of their identity.”

4. **BOOK REVIEW** - Choose any two books and write the book review in 120-150 words in the given format.

1. The Author
2. The Content
3. Theme
4. Your favourite character

5. **ASSIGNMENT FROM GATEWAY IN ENGLISH BOOK –**

* **ASSIGNMENT 1 ON PAGE A6 AND A7.**

* **ASSIGNMENT- 6.1B ON B2-34**

* **ASSIGNMENT- 6.3A ON PAGE B2-41 AND ASSIGNMENT 6.3K ON PAGE B2-47**

* **ASSIGNMENT- 6.4B ON PAGE B2-52.**

* **Q-5 ON PAGE D-14, Q-3 ON PAGE D-25, Q-4 ON PAGE D- 38, Q-3 ON PAGE 54.**

HINDI

1. निम्नलिखित पाठों को ध्यानपूर्वक पढ़िए एवं प्रत्येक पाठ का माइंड मैप तैयार करें –

- बड़े भाई साहब
- डायरी का एक पन्ना
- तताँरा-वामीरो कथा

2. “बुरा जो देखन मैं चला...” साखी का भावार्थ लिखिए।

3. कबीरदास के अनुसार मनुष्य को किस प्रकार का व्यवहार करना चाहिए?

4. साखियों में कौन-कौन से जीवन मूल्य बताए गए हैं?

5. कबीरदास की भाषा-शैली की विशेषताएँ लिखिए।

6. अपनी पसंद की किसी एक साखी को सुंदर लेखन में लिखकर उसका अर्थ लिखिए।

7. मीरा के पदों में भक्ति भावना कैसे प्रकट हुई है?

8. “मेरे तो गिरधर गोपाल...” पद का भाव लिखिए।

9. टोपी शुक्ला और इफ़्रन की मित्रता समाज को क्या संदेश देती है?

10. पाठ में दिखाए गए सामाजिक भेदभाव पर अपने विचार लिखिए।
11. वर्तमान समाज में आपसी भाईचारे और सौहार्द बनाए रखने के लिए क्या प्रयास किए जाने चाहिए?
12. विद्यालय में पुस्तकालय की व्यवस्था सुधारने हेतु प्रधानाचार्य को पत्र लिखिए
13. निम्न विषयों पर अनुच्छेद लेखन कीजिए –
 - पर्यावरण संरक्षण
 - समय का सदुपयोग
14. “हरिहर काका” पाठ के आधार पर संयुक्त परिवार एवं एकल परिवार की तुलना चार्ट के माध्यम से प्रस्तुत कीजिए। पाठ के किसी एक दृश्य का चित्र बनाकर उसका वर्णन लिखिए।

MATHEMATICS

Activity: (Co-ordinate Geometry)

On a Cartesian plane, locate the following points;

Hospital (3, 4)

School (9, 12)

Park (2, -1)

Railway Station (-6, 2)

Bus stop (2, -4)

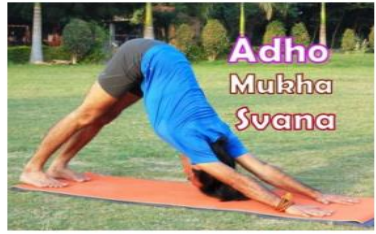
Show their perpendicular distances from each axes using any object like toothpick, matchstick etc. Paste it on a thick sheet or cardboard.

Activity: (Real Numbers)

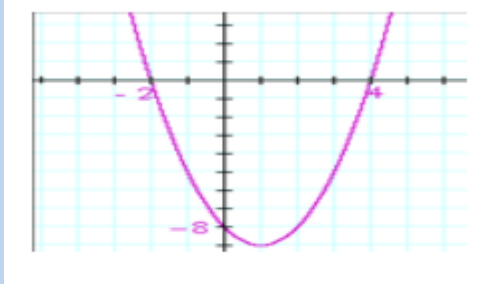
Present the grouping/classification of different types of numbers in a creative manner to show the hierarchy of numbers.

Case Based Questions

1. To enhance the reading skills of grade X students, the school nominates you and two of your friends to set up a class library. There are two sections- section A and section B of grade X. There are 32 students in section A and 36 students in section B.
 - a) What is the minimum number of books you will acquire for the class library, so that they can be distributed equally among students of Section A or Section B?
 - b) If the product of two positive integers is equal to the product of their HCF and LCM is true then, find the HCF of the number of students in each section.
 - c) Express the students in each section as a product of their primes.
 - d) If p and q are positive integers such that $p = ab^2$ and $q = a^2b$, where a, b are prime numbers, then find the LCM (p, q).
2. An asana is a body posture, originally and still a general term for a sitting meditation pose, and later extended in hatha yoga and modern yoga as exercise, to any type of pose or position, adding reclining, standing, inverted, twisting, and balancing poses. In the figure, one can observe that poses can be related to representation of quadratic polynomial.



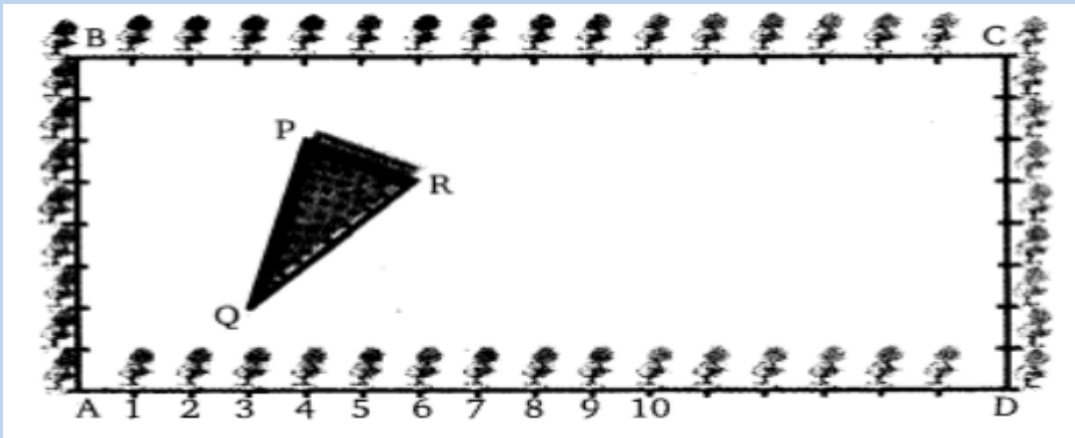
- What is the shape of the poses shown?
- In the graph, how many zeroes are there for the polynomial?



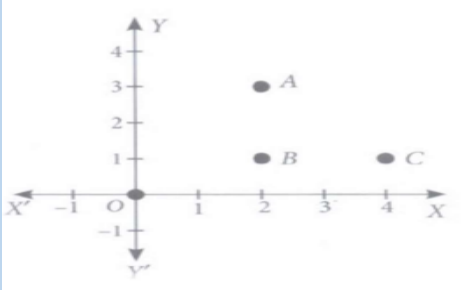
- Find the two zeroes in the above shown graph.
- Find the zeroes of the quadratic polynomial :

$$4\sqrt{3}x^2 + 5x - 2\sqrt{3}$$

- The class X students school in krishnagar have been allotted a rectangular plot of land for their gardening activity. Saplings of Gulmohar are planted on the boundary at a distance of 1 m from each other. There is triangular grassy lawn in the plot as shown in the figure. The students are to sow seeds of flowering plants on the remaining area of the plot.



- Taking A as origin, find the coordinates of P
 - What will be the coordinates of R, if C is the origin?
 - What will be the coordinates of Q, if C is the origin?
 - Calculate the area of the triangles if A is the origin.
- Alia and Shagun are friends living on the same street in Patel Nagar. Shagun's house is at the intersection of one street with another street on which there is a library. They both study in the same school and that is not far from Shagun's house. Suppose the school is situated at the point O. i.e., the origin, Alia's house is at A. Shagun's house is at B and library is at C. Based on the above information, answer the following questions.
 - How far is Alia's house from Shagun's house?
 - How far is the library from Shagun's house?
 - Show that for Shagun, school is farther compared to Alia's house and library.
 - Show that Alia's house, shagun's house and library for an isosceles right triangle.



5. A Mathematics Exhibition is being conducted in your School and one of your friends is making a model of a factor tree. He has some difficulty and asks for your help in completing a quiz for the audience. Observe the following factor tree and answer the following:



- What will be the value of x ?
- What will be the value of y ?
- What will be the value of z ?
- Show the prime factorization of 13915.

SCIENCE

ACTIVITY

- Create a timeline showing major environmental changes over the past century (such as deforestation, pollution, or climate change) and their impact on society. [ROLL NO. 1- 15]
- Create comic strips that narrate the journey of electricity from generation to household usage, highlighting its importance and safety. [ROLL NO. 16 - 32]

PRACTICAL FILE WORK

Complete the following experiments in Science practical file.

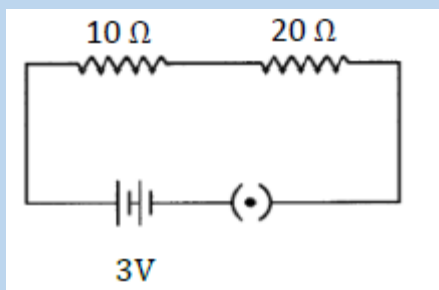
- To perform and observe the following reactions: combination, decomposition, displacement and double displacement reaction.
- Find the pH of the samples by using pH paper.

Complete the following questions in their respective notebooks

- A gardener notices that a plant wilts when its stem is cut near the base.
 - Which tissue gets damaged due to cutting?
 - What is the role of this tissue?
 - Why do leaves wilt after water supply stops?
- Riya eats food rich in carbohydrates but suffers from poor digestion due to lack of enzymes.
 - Which digestive gland secretes enzymes for carbohydrate digestion?
 - What will happen if saliva production decreases?

c. Why is digestion important for the body?

3. A student accidentally touches a hot iron rod and immediately pulls back the hand. What type of response is this? Which part of the nervous system controls it?
4. A plant bends towards sunlight kept near a window. Name the phenomenon shown. Why does the stem bend toward light?
5. Three bulbs are connected in series. What happens if one bulb fuses? How does current behave in a series circuit? Why are series circuits not preferred in homes?
6. Study the following electric circuit and find (i) the current flowing in the circuit and (ii) the potential difference across $10\ \Omega$ resistor.



7. Baking soda is used in making cakes soft and fluffy.
 - a. What gas is released during heating?
 - b. Write the chemical name of baking soda.
 - c. Why does the cake rise?
8. On diluting an acid, it is advised to add acid to water and not water to acid. Explain why it is so advised?
9. Silver chloride turns grey in sunlight. Which type of reaction is this? Why does the colour change occur?
10. What is the colour of ferrous sulphate crystals? How does this colour change after heating?
11. The sky appears blue during daytime. Which phenomenon is responsible? Which colour scatters the most?
12. Why does the sky appear dark to passengers flying at high altitudes?

SOCIAL SCIENCE

Part A –Assignment

Chapters: Development (Economics) & Resources and Development (Geography)

NOTE: Answer the following questions neatly in your social science notebook:

I. Very Short Answer Questions

1. What is development?
2. Define resource.
3. What is sustainable development?
4. Name any two renewable resources.
5. What is resource planning?

II. Short Answer Questions

1. Explain the limitations of per capita income as a measure of development.
2. Differentiate between renewable and non-renewable resources.
3. Explain the importance of sustainable development.
4. Describe the classification of resources with examples.
5. Explain the steps involved in resource planning in India.
6. Why is conservation of resources important?
7. Explain any three developmental goals of people.
8. Describe the role of education and health in development.

III. Long Answer Questions

1. "Development for one may not be development for another." Explain with examples.
2. Explain the problems caused due to overuse of resources.
3. Describe different types of resources on the basis of ownership and exhaustibility.

4. Explain the importance of sustainable resource development.

IV. Map Work - Locate and label major soil types on the political map of India.

Part B – CBSE Project Work (Choose Any One Topic)

Prepare a project file (8–10 pages) on any ONE of the following topics:

1. Consumer Rights
2. Social Issues
3. Sustainable Development

The Project File Should Include:

- Cover Page
- Acknowledgement
- Index
- Introduction
- Main Content with headings/subheadings
- Relevant pictures, newspaper cuttings, charts, diagrams, or survey work
- Conclusion
- Bibliography

Instructions:

- The project may be in PowerPoint Presentation (PPT) or PDF Format.
- Maintain neat presentation and proper headings.
- Include creative work such as posters, slogans, surveys, and charts.

ARTIFICIAL INTELLIGENCE

Q1. Visit the URL https://www.youtube.com/watch?v=ZYGND_SLqUQ and learn how to properly maintain and take care of your computer properly. Then, write five important points on computer maintenance in your notebook.

Q2. Visit the given website <https://www.my-goodness.net/> and participate in the activities to explore your decision-making skills. Observe how personal morals, values, and ethics influence your choices, then write a short reflection on what you learned from activity in your notebook.

Q3. Short Answer Questions:

- a. What is AI modeling?
- b. Define machine learning model.
- c. What is the difference between supervised and unsupervised learning?
- d. What is training data in AI?
- e. Name any two real-life applications of AI modeling.
- f. What is the AI Project Cycle?
- g. Name the five stages of the AI Project Cycle.
- h. What is problem scoping in AI?
- i. Why is data collection important in AI projects?
- j. What do you understand by ethical framework in AI?

Q4. Long Answer Questions:

- a. Explain the concept of AI modeling and its importance in problem-solving.
- b. Describe different types of AI models with suitable examples.
- c. Explain the steps involved in building and training an AI model.
- d. Discuss the role of data in advanced AI modeling.
- e. How do advanced AI models impact industries like healthcare, education, and transportation?

Q5. Competency-Based Questions:

- a. A school wants to develop an AI system to improve student attendance. Explain how each stage of the AI Project Cycle would be used to design this system, and present your idea in a well-structured report and write in notebook.

INFORMATION TECHNOLOGY

Practical Book Work

Activity 1 - Create a Two-Page School Newsletter

Create a file named **School_Newsletter.odt** and design a two-page newsletter containing:

- School introduction
- Recent achievements
- One table showing examination results
- At least two images
- **Templates and Styles**
- **Footer with page numbers**

Activity 2 - Design a Poster on “Save Environment”

Create a file named **Save_Environment_Poster.odt** and design an attractive poster using:

- A suitable **title style**
- At least one **image**
- **Shapes** from the Drawing Toolbar
- **Fontwork** for the heading
- **Text wrapping** around the image
- A decorative **page border**

Activity 3 - Prepare a Project Report on “Artificial Intelligence in Education”

Create a file named **AI_in_Education.odt** and prepare a report of **4–5 pages** using:

- A **cover page**
- **Heading styles**
- **Table of Contents**
- Relevant **images**
- **Header and Footer**
- **Page numbers**
- **Track Changes** (make at least two edits and show the changes)

Submission Instructions

- Complete all three practical activities neatly.
- Attach printouts and screenshots for each activity.
- Save all digital files with appropriate names.
- Submit the Practical book in the first Information Technology lab session after the summer vacation

Unit 1: Digital Documentation (Advanced) using Libre Office Write

Section A: Multiple Choice Questions

1. Which shortcut key opens the Styles window in LibreOffice Writer?
a) F5 b) F7 c) F11 d) F12
2. Which style is used to format an entire page?
a) Paragraph Style b) Character Style c) Page Style d) List Style
3. Which style is used to format selected text only?
a) Character Style b) Frame Style c) Table Style d) Page Style
4. Which option is used to apply a style to multiple locations in a document?
a) Auto Format b) Fill Format c) Clone Format d) Copy Style
5. Which option is used to insert an image?
a) Tools → Image b) Insert → Image c) Format → Picture d) Edit → Insert
6. Which tool removes unwanted portions of an image?
a) Rotate b) Crop c) Resize d) Group
7. Which toolbar is used to create flowcharts and shapes?
a) Standard Toolbar b) Drawing Toolbar c) Image Toolbar d) Table Toolbar
8. Which feature automatically creates a list of headings and page numbers?
a) Header b) Table of Contents c) Footer d) Bookmark
9. Which feature records changes made by different users?
a) Spell Check b) Track Changes c) AutoCorrect d) Mail Merge
10. Which file extension is used for LibreOffice Writer documents?
a) .docx b) .txt c) .odt d) .ppt
11. Which style category is used to format tables?
a) Table Style b) Page Style c) Frame Style d) Character Style
12. Which option stores only the image reference and reduces file size?
a) Embed b) Link c) Crop d) Compress
13. Which style category is used for numbering and bullets?
a) Character Style b) List Style c) Frame Style d) Table Style
14. Which key is used to exit Fill Format mode?
a) Enter b) Shift c) Esc d) Tab
15. Which style category is used to format containers that hold text and graphics?
a) Frame Style b) Character Style c) List Style d) Table Style
16. Which option combines multiple objects into one?
a) Merge b) Join c) Group d) Align
17. Which feature helps create documents with a pre-designed format?
a) Templates b) Macros c) Filters d) Scenarios
18. Which menu contains the Drawing Toolbar option?
a) Edit b) View c) Format d) Tools
19. Which option is used to rotate an image?
a) Rotate b) Filter c) Transparency d) Anchor
20. Which style is applied by default to a new document?
a) Heading 1 b) Default Style c) Text Body d) Custom Style

Section B: Short Answer Questions (Answer in 30–50 Words)

1. What is a Style in LibreOffice Writer?
2. Name the six categories of Styles.
3. What is the purpose of Fill Format?
4. Differentiate between Cropping and Resizing.
5. What is the use of Templates?
6. Explain the Track Changes feature.
7. What is a Table of Contents?
8. What is the benefit of linking an image?
9. How can you group drawing objects?
10. Write the steps to insert an image in Writer.

Section C: Case Study Based Questions

Case Study 1: School Magazine

Riya is preparing a school magazine in LibreOffice Writer. She wants all chapter headings to have the same font, size, and color. She also wants to insert photographs and automatically generate a Table of Contents.

Questions:

1. Which feature should Riya use to format all headings consistently?
2. Which style is most suitable for headings?
3. Which menu is used to insert images?
4. Which feature will generate the Table of Contents automatically?

Case Study 2: Family Tree Project

Arjun is creating a family tree using rectangles, arrows, and text boxes. After completing the design, he wants to move the entire diagram as one object and change the color of all shapes together.

Questions:

1. Which toolbar should Arjun use to create the diagram?
2. Which feature will combine all objects into one?
3. Which toolbar allows changing fill and line colors?
4. What is the benefit of grouping objects?

Case Study 3: Collaborative Editing

Three students are working on the same project report. The teacher wants to identify who made each change and accept or reject them later.

Questions:

1. Which feature should be enabled?
2. What is the advantage of this feature?
3. Can changes be accepted or rejected later?
4. In which type of documents is this feature especially useful?

Note: Complete this in your IT notebook as part of your holiday homework.

ART AND CRAFT

- ▶ Prepare a neat and well-maintained Art File from PT-I syllabus.
- ▶ Complete the still life composition “**Pots and Kettle**” using pencil shading techniques.
- ▶ Draw and colour the compositions “**Kettles, Apples and Wine**” and “**Flowers**” neatly in the Art File.
- ▶ Complete the compositions “**Fruits**” and “**Vegetables**” with proper colouring and finishing.