

SAINIK SCHOOL CHITTORGARH

SUMMER VACATION HOLIDAY HOMEWORK

CLASS X

SUBJECT	SUBMITTED BY
MATHS	MR MANISH JAIN
SCIENCE	MR TONY A. MR ONKAR SINGH MR BHUPENDRA BIHARI VYAS
HINDI	MR B K SINGH
SOCIAL SCIENCE	MR JAIPAL SINGH
ENGLISH	MR RAWAL RATHORE
COUNSELING	MS PRIYANJALI
COMPUTER	MR. KULDEEP MALVIYA

GENERAL INSTRUCTIONS

INSTRUCTIONS:

1. The holiday homework will be considered as your project work.
2. The marks awarded for this will be counted towards Internal –assessment.
3. On page 1: write -Project Work, name, class, roll number, topic etc

PROJECT WORK

NAME:

CLASS:

SCHOOL NUMBER:

HOUSE:

SECTION

4. Last page of the project will carry the following certificate

CERTIFICATE

This is to certify that I _____ OF Class _____. Have done the project work on my own. It is my own original work as per the guidelines provided by _____ (Name of the teacher).

Signature

Name:

MATHS

ASSIGNMENT CHAPTER 1 : REAL NUMBERS

- Q.1. The HCF of two numbers is 23 and their LCM is 1449. If one of the numbers is 161, find the other.
- Q.2. Find the largest number which divides 438 and 606 leaving remainder 6 in each case.
- Q.3. Find the least number which when divides 35, 56 and 91 leaves the same remainder 7 in each case.
- Q.4. Three sets of English, Mathematics and Science books containing 336, 240 and 96 books respectively have to be stacked in such a way that all the books are stored subject wise and the height of each stack is the same. How many stacks will be there?
- Q.5. Six bells commence tolling together and toll at intervals of 2, 4, 6, 8, 10, 12 minutes respectively. In 30 hours, how many times do they toll together?
- Q.6. Prove that $\sqrt{3}$ is irrational.
- Q.7. Explain why $7 \times 11 \times 13 + 13$ and $7 \times 6 \times 5 \times 4 \times 3 \times 2 \times 1 + 5$ are composite numbers.
- Q.8. Check whether $6n$ can end with the digit 0 for any natural numbers n .
- Q.9. State the fundamental theorem of Arithmetic

CHAPTER 2: POLYNOMIALS

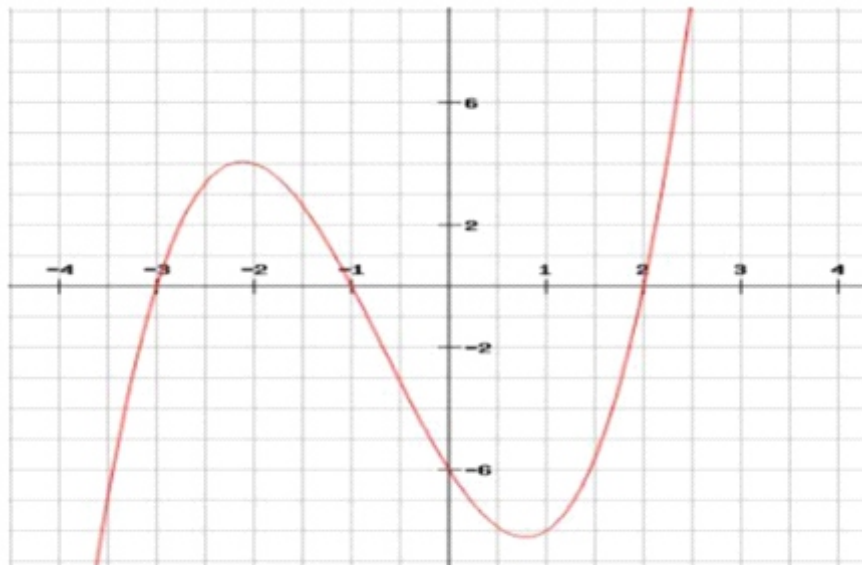
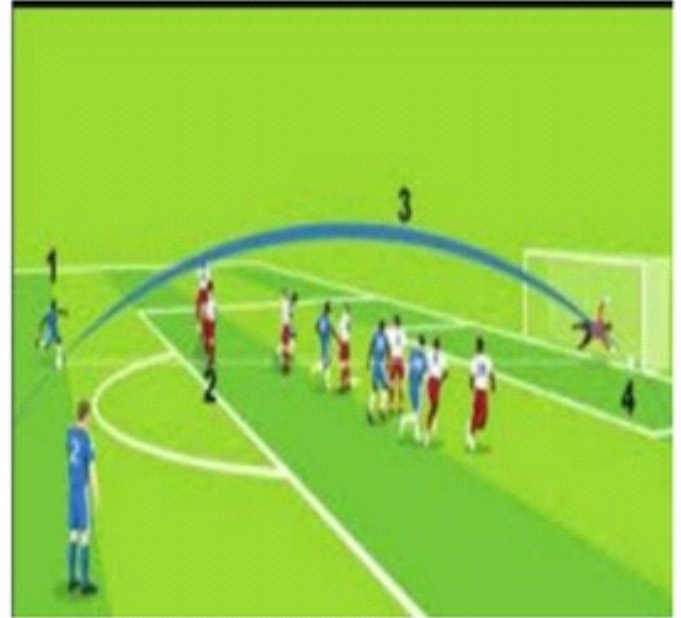
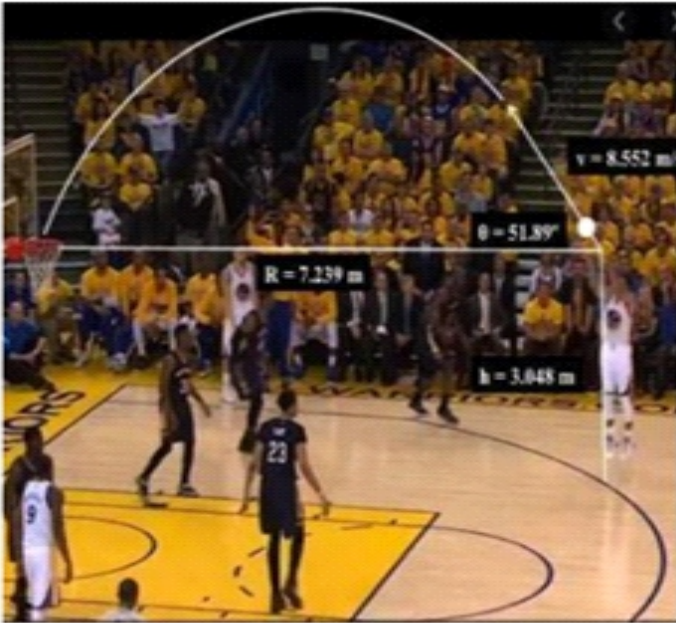
- Q.1. Find the zeroes of the polynomial $x^2 + \frac{1}{6}x - 2$, and verify the relation between the coefficients and the zeroes of the polynomial.
- Q.2. Find a quadratic polynomial, the sum and product of whose zeroes are and , respectively. Also find its zeroes.
- Q.3. Find the zeroes of the polynomial $f(x) = 2\sqrt{3}x^2 - 5x + \sqrt{3}$ and verify the relation between its zeroes and coefficients.
- Q.4. Find the quadratic polynomial whose zeroes are 2 and -6. Verify the relation between the coefficients and the zeroes of the polynomial.
- Q.5. Find the quadratic polynomial, sum of whose zeroes is 8 and their product is 12. Hence, find the zeroes of the polynomial.
- Q.6. If x and $x = -3$ are the roots of the quadratic equation $ax^2 + 2ax - 5x - 10$ then find the value of a and b .
- Q.7. If $x + a$ is a factor of the polynomial $2x^2 + 2ax + 5x + 10$, find the value of a .
- Q.8. If one zero of the polynomial $x^2 - 4x - 1$ is $2 + \sqrt{5}$, write the other zero.
- Q.9. Find , are the zeros of polynomial $x^2 + 6x + 4$ then write the polynomial.
- Q.10. If 1 is a zero of the quadratic polynomial $ax^2 - 3(a - 1)x - 1$ is 1, then find the value of a .

CHAPTER 3 : PAIR OF LINEAR EQUATIONS IN TWO VARIABLES

- Q.1. By graphical method, find whether the pair of linear equations are consistent or not. If consistent, solve them. $3x + y + 4 = 0$, $6x - 2y + 4 = 0$
- Q.2. Find the value of k for which each of the following systems of equations have infinitely many solution:
 $(k + 2)x - (2k - 1)y = 3(2k - 1)$
- Q.3. When 3 is added to the denominator and 2 is subtracted from the numerator a fraction becomes $\frac{1}{4}$. And, when 6 is added to numerator and the denominator is multiplied by 3, It becomes $\frac{2}{3}$. Find the fraction.
- Q.4. Show graphically that each one of the following systems of equations has infinitely many solutions:
- Q.5. Draw the graph of $x - y + 1 = 0$ and $3x + 2y - 12 = 0$. Calculate the area of the triangle bounded by these lines and the x-axis.
- Q.6. The age of father is twice the sum of ages of his two children. Ten years hence, the age of father will be three-quarter of the sum of the ages of his children then. Find the present age of father.
- Q.7. Find the value of „k” so that the following system of equations has no solution.
a) $(3k+1)x + 3y - 2 = 0$; $(k^2+1)x + (k - 2)y - 5 = 0$
- Q.8. The sum of the two-digits number and the number formed by interchanging its digits is 110. If 10 is subtracted from the first number, the new number is 4 more than 5 times the sum of the digits in the first number. Find the first number.

Case Study Based questions :

Q.1. Basketball and soccer are played with a spherical ball. Even though an athlete dribbles the ball in both sports, a basketball player uses his hands and a soccer player uses his feet. Usually, soccer is played outdoors on a large field and basketball is played indoors on a court made out of wood. The projectile (path traced) of soccer ball and basketball are in the form of parabola representing quadratic polynomial.



Answer the following questions -

- (i) How many zeroes are there for given graph?
- (ii) What are the three zeroes in the above graph?
- (iii) Write the condition for a downward parabola.
- (iv) Write the condition for an upward parabola.

HINDI

ASSIGNMENT क्षितिज भाग 1 एवं कृतिका भाग 1

प्रश्न 1. समास की परिभाषा एवं उनके भेदों के बारे में बताये एवं उदाहरण सहित स्पष्ट करें।

प्रश्न 2. "बालगोबिन भगत" एवं 'नेताजी का चश्मा' पाठ का सारांश संक्षेप में लिखें।

प्रश्न 3. वाच्य की परिभाषा एवं उनके भेद उदाहरण सहित स्पष्ट कीजिए।

प्रश्न 4. पत्र लेखन के महत्त्व को बताते हुए औपचारिक पत्र और अनौपचारिक पत्रों के पाँच-पाँच नमूनों को लिखें।

प्रश्न 5. कोई एक कविता (150 शब्द) अथवा कहानी (400 शब्द) अथवा निबंध (400 शब्द) लिखिए जिसमें आपके सपनों का वर्णन हो, जो आप अपने जीवन में करना चाहते हैं।

PROJECT WORK:

प्रश्न 1. सूरदास एवं गोस्वामी तुलसीदास का सचित्र जीवन परिचय एक चार्ट पेपर पर बनाएँ।

SOCIAL SCIENCE SECTION A

ASSIGNMENT FILE WORK (PROJECT WORK)

TOPIC – CONSUMER AWARENESS

Following contents may be added for above mention topics

- (i) Aim of consumer awareness
- (ii) Meaning of consumer awareness
- (iii) Need of consumer awareness
- (iv) Consumer Redressal System in India
- (v) No. of consumer rights
- (vi) Consumer responsibilities
- (vii) Major concerns of consumer movement in India
- (viii) Example of consumer Exploitation
- (ix) Conclusion
- (x) Paste pictures from newspaper or handmade pictures as much u can
- (xi) Bibliography
- (xii) Project work must be of minimum 15 pages

Notebook Assignment: Notes of chapter 'Water' with diagram and Map work

SOCIAL SCIENCE SECTION B

ASSIGNMENT FILE WORK (PROJECT WORK)

TOPIC – SUSTAINABLE DEVELOPMENT

Following contents may be added for above mention topic

- (i) What is sustainable development?
- (ii) Is sustainable development just about saving the environment, or other are there other factors involved such as human welfare, construction, politics or economies?
- (iii) Are there any local sustainable development projects?
- (iv) What are the benefits of sustainable development?
- (v) What are some national sustainable projects?
- (vi) What are problems and challenges associated with sustainable development?
- (vii) What are some organizations that are involved in sustainable development?
- (viii) Zero hunger
- (ix) Clean water and sanitation
- (x) Conclusion
- (xi) Bibliography
- (xii) Paste pictures from newspaper or handmade pictures as much u can
- (xiii) Project work must be of minimum 15 pages (File pages)

Notebook Assignment: Notes of chapter "Water" with diagram and maps

ENGLISH

Reading Activity

Q1. Read – a) The Hindu b) Watch the Wion News c) Read magazines like- Frontline
Learn at least 10 words daily and use it in sentences of your own. Do come prepared with four hundred words and sentences written in a separate note-book of at least 100 pages.

Creative -writing

Q2. PORTFOLIO: PREPARE A PORTFOLIO WITH THE FOLLOWING – (Prepare a file with A4 size sheets)

Introduction	(1 Page each)
My strengths	(1 Page each)
I need to improve on...	(1 Page each)
My achievements	(1 Page each)
I have participated in...	(1 Page each)
The books I have read	(1 Page each)
The book I wish to read	(1 Page each)

Q3. A TRAVEL BROCHURE

Do research on FAMOUS ARCHITECTURAL STRUCTURES (any 3 – 4 monasteries/temples) of Sikkim. Prepare a travel brochure describing them. You can use the following guidelines to make your brochure informative and attractive (with pictures).

- 1) Name of the temple/monastery Explain about its Importance (1 Page each)
- 2) Location (1 Page each)
- 3) How to get there (1 Page each)
- 4) Architectural details (1 Page each)
- 5) Historical background (1 Page each)
- 6) Best time to visit (1 Page each)

Q4. You are Dilavar/Zarine Khan, a resident of Modi Enclave, Raipur. While going to the office you notice a number of homeless people taking shelter under the flyovers in the small parks. The encroachment looks really shabby as it is in the centre of the market. Write a letter to the Editor showing your concern about it, in not more than 120-150 words. Also suggest some ways to curb the problem

Q5. You have just read two of the poems of Robert Frost. (a) Dust of Snow (b) Fire and Ice

(a) Theme /Central Idea (b) Summary (c) Figures of Speech (d) Rhyme Scheme (d) Meanings of words

Q6.. Questionnaire Making :(i)Prepare 15 multiple choice questions from the story a) A Letter to God b) A Triumph of Surgery c) The Thief Story

(ii)Prepare a Character-sketch of Lencho ,Mrs. Pumphery and the thief- Hari Singh in 120-150 words.

Note: In case of clarification contact at-7357138255. Between 8.00 PM to 8.30 PM

The deadline for submission of the above work is July 1, 2024, within the subject period.

LIFE SKILLS & VALUE EDUCATION

ASSIGNMENT

“Militant decency- It is the idea that you can look at world and its flaws, injustices and cruelty and be deeply angry yet, choose to utilise or channelize that anger by doing the right thing and making the world a better place.”

How can we use the concept of 'militant decency in our daily lives. Express your thoughts quoting your own personal examples or the ones of some influential people, quotes, ideas, other people's research, etc. in form of 150- 200 word essay.

COMPUTER SCIENCE

CHAPTER 1: AI & ITS TECHNOLOGY

Question 1 Write about AI & Technology used in AI.

CHEMISTRY

CHAPTER 1 : CHEMICAL REACTIONS AND EQUATIONS

1. What is the need to balance a chemical equation?
2. The packets of potato wafers are flushed with nitrogen gas. Why?
3. Which one is a chemical change? Electrolysis of water or sodium chloride exposed to sunlight?
4. Carbon monoxide reacts with hydrogen gas at 340 atm. to form methyl alcohol. Write balanced chemical equation.
5. White silver chloride turns grey in sunlight. Why?
6. Why solid CO₂ is called dry ice?
7. Which is the brown coloured gas evolved when lead nitrate crystals are heated in a dry test tube?
8. Write a balanced equation to represent the following reaction: Iron reacts with steam to form Iron (II, III) oxide and hydrogen gas.
9. Write any one example of an endothermic reaction and exothermic reaction.
10. A cadet added Calcium oxide to water in a beaker. Answer the following
 - (a) Write a balanced chemical equation for the reaction that takes place in the beaker .
 - (b) Write one use of the solution of the product formed in the above reaction.
11. What is the colour of FeSO₄. 7H₂O crystals? How its colour change upon heating? Give balanced equation for the changes.
12. A magnesium ribbon is burnt in oxygen to give a white compound 'X' accompanied by emission of light. If the burning ribbon is now placed in an atmosphere of nitrogen, it continues to burn and forms a compound 'Y'. (a) Write the chemical formulae of X and Y. (b) Write a balanced chemical equation, when X is dissolved in water.
13. A cadet heated Lead nitrate in a boiling tube. a) Identify the type of reaction. b) Write a balanced chemical equation for the reaction. c) What are the gaseous products formed in this reaction
14. A substance 'X', which is an oxide of a group 2 element, is used intensively in the cement industry. This element is present in bones also. Reacting with water it forms a solution which turns red litmus blue. Identify 'X' and write the chemical reactions.
15. What changes do you observe in the iron nails and colour of copper sulphate solution if the iron nails are dipped in CuSO₄ solution for 15 minutes?
16. A shiny brown coloured element 'X' on heating in air becomes black in colour. Name the element 'X' and the black coloured compound formed. Write the chemical equation for the reaction.
17. A solution of potassium chloride when mixed with silver nitrate solution, an insoluble white substance is formed.
 - (i) Translate the above statement into a chemical equation. (ii) State type of this reaction.
18. Differentiate between photochemical and thermal decomposition reactions.
19. What is the chemical formula of rust? Give conditions for rusting.
20. (a) Why do silver articles turn black when kept in the open for a few days? Name the phenomenon involved. (b) Name the black substance formed and give its chemical formula.
21. An aluminium can is used to store Ferrous sulphate solution. It is observed that in few days holes appeared in the can. Explain the observation and write chemical equation to support your answer.
22. Respiration is an exothermic reaction. Explain why?
23. Write a balanced chemical equation for each of the following reactions and also classify them. (a) Lead acetate solution is treated with dilute hydrochloric acid to form lead chloride and acetic acid solution. (b) A piece of sodium metal is added to absolute ethanol to form sodium ethoxide and hydrogen gas.
24. Aqueous solutions of lead nitrate and potassium iodide are mixed together. What change in colour will you observe? Write balanced equation for the reaction and the type of the reaction.
25. In the refining of silver, the recovery of silver from silver nitrate solution involves displacement by copper metal. Why? Also write down the reaction involved.
26. What is Redox reaction? Identify the reducing agent and oxidizing agent in the following reactions.
 - (a) $\text{CuO} + \text{H}_2 \rightarrow \text{Cu} + \text{H}_2\text{O}$
 - (b) $\text{Fe}_2\text{O}_3 + 3\text{CO} \rightarrow 2\text{Fe} + 3\text{CO}_2$
 - (c) $4\text{NH}_3 + 5\text{O}_2 \rightarrow 4\text{NO} + 6\text{H}_2\text{O}$

PHYSICS

CHAPTER 1: REFLECTION AND REFRACTION

Content 1. SOLVE THE FOLLOWING QUESTIONS.

1. In order to obtain a real image of magnification 2 using a converging lens of focal length 20 cm, where should an object be placed from the lens?
2. A convex lens is made of a material having refractive index 1.2. If it is dipped in water (1.33), it will behave like a -----
3. Two thin lenses of power, + 3.5 D and -2.5 D are placed in contact, then the power and focal length of the lens combination is -----
4. The distance between object and the screen is D. Real images of an object are formed on the screen for two positions of a lens separated by a distance 'd'. The ratio between the sizes of two images will be -----
5. In which of the following set, the materials are arranged on the basis of ascending order of their refractive index?
(a) air, silicon, water, diamond (b) air, silicon, kerosene, diamond (c) air, water, silicon, diamond (d) alcohol, air, silicon, diamond
6. A lens forms a real image of a point object placed on its principal axis. If the upper half of the lens is cut, what is the effect on image formed?
7. A convex lens of focal length 'f' produces a real image of size m-times the size of the object. Then the object distance is -----
8. The change in focal length of an eye lens is caused by the action of ---
9. The human eye can focus objects at different distances by adjusting the focal length of the eye lens. This is due to -----
10. The broad wavelength range of visible spectrum is -----
11. The distance of distinct vision of a person is 50 cm. He wants to read a book placed at 25 cm. What should be the focal length of the spectacles?
12. Different objects at different distances are seen by the eye. The parameter that remains constant is -----

Content 2. Prepare at least one model/project from the following: -

1. Prepare the chart (3x2 ft) of position and nature of the image formed for the different position of the object in case of concave mirror.
2. Prepare the colourful chart (3X2 ft) for the different defect of vision their causes, defective eye ray diagram and its rectification.
3. Draw the labelled diagram of structure of human eye.
Compile the search report on number of Corneal blind people in the world. What can we do for them? Can we gift vision to somebody after death? Write complete detail about collection and distribution process of eye donation.

BIOLOGY

CHAPTER : MANAGEMENT OF NATURAL RESOURCES

- Content 1. Introduction
- Content 2. Forests and Wildlife
- Content 3. Chipko Movement
- Content 4. Water Pollution
- Content 5. Water Harvesting
- Content 6. Fossil Fuels
- Content 7. Concept of 5 R's
- Content 8. Green Hydrogen Mission

Notebook Assignment: You are also directed to give a detail account of HOME ASSIGNMENT in a separate notebook