

ARMY PUBLIC SCHOOL, KANPUR
HOLIDAY HOMEWORK (2023-24)
Class IX
SUBJECT: - ENGLISH

NOTE- All the holiday homework should be done in a separate file. Homework done in classroom notebook will not be accepted.

Q1 Read the third chapter of the supplementary book “Iswaran- the storyteller”. Brainstorm and write a different conclusion of the story.

Q2 Read the book “Wings of Fire” by APJ Abdul Kalam and write a book review on the same.

Q3 Draw a Tense chart with examples.

ART INTEGRATED PROJECT: -

Q4. Write a BIO SKETCH of the famous poet / writer of Arunachal Pradesh.

SUBJECT: - HINDI

1-किसी पेड़ ,फूल या फल के पौधे की आत्मकथा लगभग 100शब्दों में लिखे ।

2-विभिन्न समाचार पत्र पत्रिकाओं से लघु कथाएं पढ़कर कोई दो लघुकथाएं लिखे चित्र सहित ।

3-ग्रीष्मावकाश में आप कहां घूमने जाएंगे इस विषय पर दो मित्रों के बीच संवाद लेखन लिखे ।

4-स्मृति पाठ के आधार पर अपने जीवन का एक रोमांचक अनुभव लिखें।

5-अरुणाचल प्रदेश से संबंधित जानकारी का सचित्र वर्णन करें जैसे भौगोलिक, स्थिति राजकीय पक्षी, फल, नृत्य ,भोजन, पशु, संस्कृति आदि ।

नोट--- यह सभी कार्य एक फाइल में करना है।

SUBJECT: - SCIENCE

1. Make a PPT on any topic from the Chapter: Natural Resources (Minimum 20 slides)
2. This will be assessed as your Portfolio (Internal Assessment)
3. Revise the chapters completed in the classes thoroughly for UT-1

SUBJECT: - SOCIAL SCIENCE

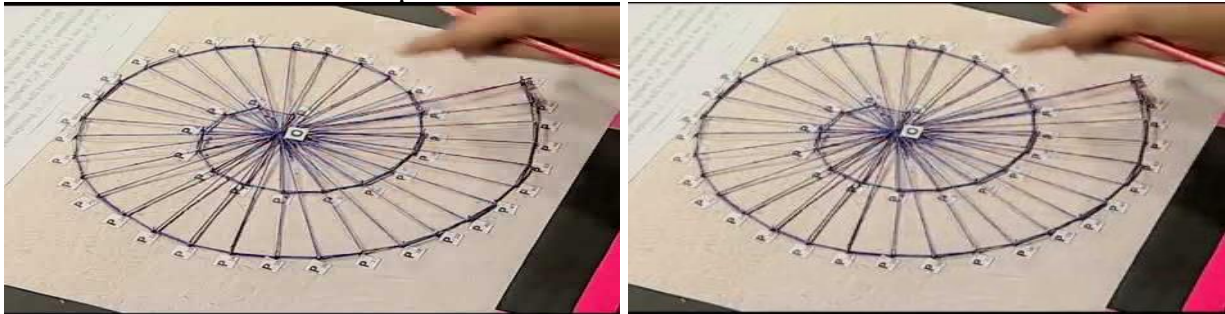
Make a Project on Disaster Management.

SUBJECT: - MATHEMATICS

1. For odd roll number students:

Design a model of spiral of $\sqrt{10}$ by using thread or wire.

Aim : To understand how to represent irrational numbers on the number line.

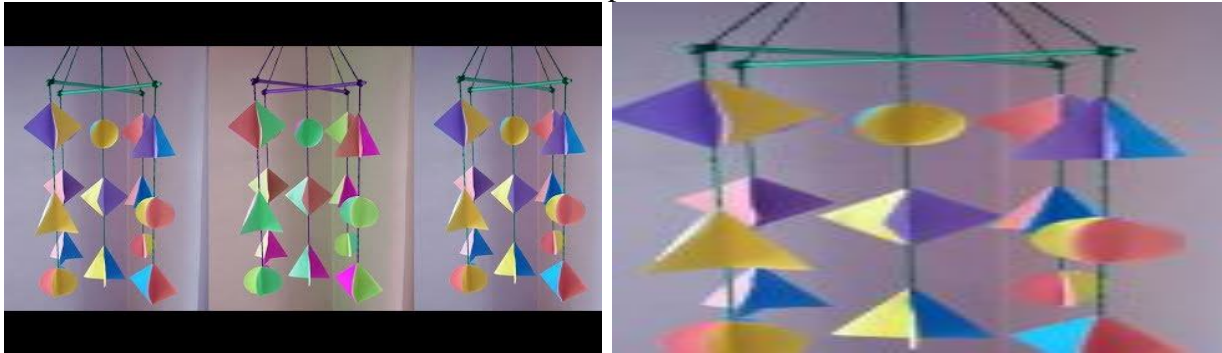


This is the link [↑](#) of the video for the help.

2. For even roll number students:

Design a wind chimes by using mathematical shapes 2D/3D.

Aim: to understand about the mathematical shapes 2D and 3D both.



This is the link [↑](#) of the video for the help.

3. Make a Power Point Presentation on the concept of polynomials.

QUESTIONS

1. Find six rational numbers between 3 and 4.
2. Represent the real number $\sqrt{15}$ on number line.
3. Show that $0.3333\dots$ can be expressed in the form of $\frac{p}{q}$, where p and q are integers and $q \neq 0$
4. Simplify:
$$\frac{3\sqrt{2}}{\sqrt{6}-\sqrt{3}} - \frac{4\sqrt{3}}{\sqrt{6}-\sqrt{2}} + \frac{2\sqrt{3}}{\sqrt{6}+2}$$
5. Factorise $64a^3 - 27b^3 - 144a^2b + 108ab^2$.
6. What are the possible expressions for the dimensions of a cuboid whose volume is given below?
Volume = $12ky^2 + 8ky - 20k$.
7. If $x - 3$ is a factor of $x^2 - 6x + 12$, then find the value of k. Also, find the other factor of the – polynomial for this value of k.
8. Write 5 expressions which are not polynomials. Justify your answers.
9. Give examples of the polynomials: a) Cubic and binomial b) Cubic and monomial c) Quadratic and trinomial d) Quadratic and monomial e) Linear and binomial f) Linear and monomial
10. For the polynomial $p(x) = 5x^3 - 3x^2 + 2x + \sqrt{2}$, mark the statements as T/F and justify.
 - a) The degree of polynomial p(x) is 4.
 - b) The degree of polynomial p(x) is 3.
 - c) The coefficient of x^2 is 3.
 - d) The coefficient of x is 2
 - e) The constant term is 3
 - f) The number of terms is 4

11. Express the following linear equations in the form $ax + by + c = 0$ and indicate the values of a , b and c in each case:

- (i) $2x + 3y = 9.35$
 (ii) $x - y - 5 - 10 = 0$
 (iii) $-2x + 3y = 6$
 (iv) $x = 3y$
 (v) $2x = -5y$

12. Write four solutions for each of the following equations:

- (i) $2x + y = 7$
 (ii) $\pi x + y = 9$
 (iii) $x = 4y$

13. Find the value of k , if $x = 2$, $y = 1$ is a solution of the equation $2x + 3y = k$

14. Rationalise the denominator of the following

- (i) $\frac{1}{\sqrt{7}}$ (ii) $\frac{1}{\sqrt{7} - \sqrt{6}}$ (iii) $\frac{1}{\sqrt{5} + \sqrt{2}}$ (iv) $\frac{1}{\sqrt{7} - 2}$

15. Find:

- (i) $9^{\frac{3}{2}}$ (ii) $32^{\frac{2}{5}}$ (iii) $16^{\frac{3}{4}}$ (iv) $125^{-\frac{1}{3}}$

16. Verify whether the following are zeroes of the polynomial, indicated against them.

- (i) $p(x) = 3x + 1$, $x = -1/3$
 (ii) $p(x) = 5x - \pi$, $x = 4/5$
 (iii) $p(x) = x^2 - 1$, $x = x - 1$

17. In which quadrant or on which axis do each of the points $(-2,4)$, $(3, -1)$, $(-4,0)$, $(2,3)$ lie?

18. What is the abscissa of origin?

19. At what point the axes intersect?

20. What is the sign of y -coordinate below the x -axis?

CASE STUDY:

Application of Parabolas-Projectile motion. An object which is thrown or projected into the air, subject to only the acceleration of gravity is called a projectile, and its path is called its trajectory. This curved path was shown by Galileo to be a parabola. Parabola is represented by a polynomial. If the polynomial to represent the distance covered is,

$$p(t) = -5t^2 + 40t + 1.2$$

i. What is the degree of the polynomial?

- a. 0
 b. 1
 c. 2
 d. 3

ii. Find the height of the projectile 4 seconds after it is launched.

- a. 80.2 m
 b. 81.2 m
 c. 81.8 m
 d. 84m

iii. The polynomial is classified as on the basis of number of terms.

- a. Linear polynomial

- b. monomial
 - c. binomial
 - d. Trinomial
- iv. The name of polynomial on the basis of degree is:
- a. Cubic polynomial
 - b. constant polynomial
 - c. quadratic polynomial
 - d. Bi quadratic polynomial
- v. If equation of parabola is given by, $p(x) = x^2 - 5x + 6$, then it's factors are:
- a. $x - 3$
 - b. $x - 2$
 - c. both (a) and (b)
 - d. none of these

NOTE:

- MAKE ONE FOLDER
- WRITE YOUR NAME, CLASS AND SECTION
- SOLVE ALL QUESTIONS ON DOUBLE SIDED A 4 SHEET

SUBJECT: - INFORMATION TECHNOLOGY

Q1- Create a poster for “Air Pollution” in MS-Word with the following features.

- 1.Fontface 2. Font size 3. Font color 4. Header &Footer 5. Images OR

Q2: Create a list of 10 students by inserting a table in MS-Word with the following fields.

- 1.Sr. No. 2.StudentName 3. Father’s Nam 4. City

Q3: - Create an article on “Gandhi & Modern India” using maximum feature of MS-Word.

Q4- Design a marksheet for a student as shown in figure below and by using formula calculate total and percentage & create column chart based on the below data:

SE R NO	NAME	ENGLIS H (100)	MATH S (100)	SCIENC E (100)	SOCIAL SCIENC E (100)	HIND I (100)	TOTA L (500)	PERCENTAG E
1	ARYAN	90	90	85	75	85		
2	ARNAV	85	95	86	74	90		
3	PARNIK A	85	98	84	78	87		
4	AYUSHI	86	96	82	79	89		
5	ANSHIK A	85	93	83	80	88		

Q5: - Create a presentation (4-6 slides) on any one of the following topics.

1. Green Skills 2. Effective Communication 3. Self-Management

SUBJECT: PHYSICAL ACTIVITY TRAINER

Make One major Game (Football, Basketball, Athletics, Handball) File with measurement.