DELHI PUBLIC SCHOOL JAMMU
HOLIDAY HOMEWORK
SESSION 2023-24

Class IX

Dear Students

Summer vacations are synonymous with fun, frolic, getting up late in the morning, going for picnics, spending time with friends, exploring new places, and watching fun filled shows on television. But there is lot more you can do to make your vacations more meaningful, interesting, and fun while still doing your favourite activities.

Here are some suggestions you may like:

- ➢ Go out for morning walk and spend time to observe nature.
- ➢ Watch your mom working in the kitchen and help her keep the house clean.
- ➢ Visit your grandparents, spend time with them.
- ➢ Teach them to operate some useful applications in mobile phones.
- ➢ Plant a sapling and watch it grow.
- ➢ Play any sport with your parents which they played during their school days.
- ➢ Devote some time for reading during the summer break. Some suggested books:

Summer vacation is the time when you can be more candid and creative. The Holiday assignments are focused to let the creative and latent talents, skills and desires of the children come to the surface in a joyful and experiential manner.
So dear children, Get... Set... Go... Enjoy doing the activities and ensure timely completion of the given assignments.

Academic Coordinator

CLASS-IX   **SUBJECT: ENGLISH**

1. **Read any one of the following poems from the book 'Beehive'. Choose the stanza/line you**
   Like the most in the poem and depict it in a creative manner.
   1. The Road Not Taken
   2. Wind

How to do: Use your imagination to convert the poem in an artistic representation on A3 or A4 sheets.

The presentation should be self- explanatory.

2. Being innovative with values and feelings.

What to do:
Create your own diary and write about any one positive change that you will bring in yourself like being punctual or being organised, on a daily basis. (Not more than 50 words each day).

Where to do: A small handmade diary which should be properly decorated.

Parameters: Accuracy, Content, Authenticity, Creativity

NOTE:
Submit your Holiday Homework to your respective Subject Teacher by 14th July,2022. Your submission will carry 10 marks. (5 marks for content and research, 3 marks for presentation and 2 marks for creativity).

विषय –हिंदी   कक्षा–नवीं

<u>कला एकीकृत परियोजना **(I)**</u>

1) जम्मू व कश्मीर तथा राजस्थान का तुलनात्मक अध्ययन निम्नलिखित बिंदुओं के आधार पर करते हुए एक आकर्षक विवरणिका (brochure) बनाइए –

- रहन–सहन
- पर्यटन
- कला व ससंकृति , आभषूण
- उसका इतिहास?

<u>कला एकीकृत परियोजना **(II)**</u>

2) आगे बढ़ती भारतीय महिलाओं की पुस्तक पढ़कर उनसे संबंधित चित्रों का संग्रह कीजिए एवं संक्षिप्त जानकारी प्राप्त करके परियोजना कार्य तैयार कीजिए।

(क) पी०टी० उषा

(ख) आरती साहा

(ग) किरणबेदी

3) <u>अनुच्छेदलेखन–</u>

(क) स्वच्छ भारत :उन्नत भारत

(ख) विज्ञापन और हमारा जीवन।

(ग) प्रदूषणःएक समस्या

4) <u>पत्र लेखन–</u>

(क) परीक्षा की सफलता पर बधाई देते हुए मित्र को पत्र लिखिए।

(ख) ग्रीष्मावकाश बिताने के लिए अपनी सखी को निमंत्रित करने के लिए पत्र लिखिए।

(ग) छात्रावास में रहने वाले छोटे भाई को मन लगाकर अध्ययन करने की सलाह देते हुए पत्र लिखिए।

(घ) फैशन में समय और धन का अपव्यय करने वाली छोटी बहन को बड़ी बहन की ओर से एक प्रेरणा पत्र लिखिए।

5) <u>विज्ञापन लेखन–</u>

i) प्रकाश बल्ब की बिक्री बढ़ाने हेतु एक विज्ञापन तैयार कीजिए ।

ii) साइकिल या अगरबत्ती बेचने के लिए एक विज्ञापन तैयार कीजिए ।

6) <u>व्याकरण–</u>

(1) शब्द तथा पद   (व्याकरण परिचय से पुनरावृत्ति कार्य Pg no. 161-164)

(2) अनुस्वार व अनुनासिक   (व्याकरण परिचय से पुनरावृत्ति कार्य   Pg no. 165-168)

(3) उपसर्ग व प्रत्यय   (पाठ के आधार पर Pg no. 169-172)

पाठ्यक्रम   (For revision)

स्पर्श– रैदास , रहीम

　　　दुख का अधिकार , एवरेस्ट मेरी शिखर यात्रा

संचयन– गिल्लू , स्मृति

　　　कृपया उपर्युक्त पाठ्यक्रम को अच्छे से पढ़िए तथा लिखकर अभ्यास कीजिए।

　　निर्देश –
➢ सारा कार्य A4 Sheet पर कीजिए।
➢ रचनात्मक कार्य करते हुए प्रारुप का ध्यान अवश्य रखिए।
➢ एवरेस्ट मेरी शिखर यात्रा , स्मृति स्वाध्ययन के लिए दिया गया है।
➢ कृपया लेख का ध्यान अवश्य रखिए।

CLASS: IX
SUBJECT: MATHEMATICS

It's summer time, school vacation has begun, its time to play and have fun INDOORS. Time to spend with kith and kin

Happy Holidays

1.   <u>Solve all questions</u>

Topic: Polynomials

Q1. If (x + k) is a factor of 2x² + 2kx + 5x + 10, find k.

Q2. Compute the value of $9x^2 + 4y^2$ if $xy = 6$ and $3x + 2y = 1$

Q3. Find the value of the polynomial $5x - 4x^2 + 3$ at $x = 2$ and $x = -1$.

Q4. Find the value of $x^3 + y^3 + z^3 - 3xyz$ if $x^2 + y^2 + z^2 = 83$ and $x + y + z = 15$

Solution:

Q5. If $(x - 1/x) = 4$, then evaluate $(x^2 + 1/x^2)$ and $(x^4 + 1/x^4)$.

Q6. Find the values of a and b so that $(2x^3 + ax^2 + x + b)$ has $(x + 2)$ and $(2x - 1)$ as factors.

Q7. Factorise $x^2 - 1 - 2a - a^2$.

Q8. **Expanding each of the following, using all the suitable identities:**

(i) (x+2y+4z)²

(ii) (2x−y+z)²

Q9. **Find the value of x³+ y ³ + z ³ − 3xyz if x² + y² + z² = 83 and x + y + z = 1**

Q10. **Prove that:**

x³+y³+z³−3xyz = (1/2) (x+y+z)[(x−y)²+(y−z)²+(z−x)²]

Topic: Numbers System &Lines and Angles

Q1. Find the value of'

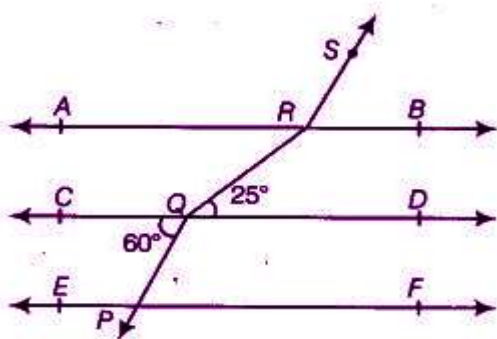$$\frac{(0.6)^0-(0.1)^{-1}}{\left(\frac{3}{8}\right)^{-1}\left(\frac{3}{2}\right)^{3}+\left(-\frac{1}{3}\right)^{-1}}$$

Q2. Represent √3.2 on the number line.

Q3. Evaluate : $(\sqrt{5} + \sqrt{2})^2 + (\sqrt{8} - \sqrt{5})^2$

Q4. Represent √3 on the number line.

,

Q5. **In the figure, if AB || CD || EF, PQ || RS, ∠RQD = 25° and ∠CQP = 60°, then find ∠QRS.**

Q6A transversal intersects two parallel lines. Prove that the bisectors of any pair of corresponding angles so formed are parallel.

Q7. **If a transversal intersects two lines such that the bisectors of a pair of corresponding angles are parallel, then prove that the two lines are parallel**

Q8. It is given that ∠XYZ = 54° and XY is produced to point P. Draw a figure from the given information. If ray YQ bisects ∠ZYP, find ∠XYQ and reflex ∠QYP.

Q9. A transversal intersects two parallel lines. Prove that the bisectors of any pair of corresponding angles so formed are parallel.

Q10. What is the product of a rational and an irrational number?
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a) Always an integer
b) Always a rational number
c) Always an irrational number
d) Sometimes rational and sometimes irrational
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2. Prepare a mind map of the topic as per given Roll no.

Roll no. – 1 to 15 – Polynomials
Roll no. – 16 to 25 – Lines & angles
Roll no. – 26 to onward. Numbers System
Where to do : In A3 size sheet

Parameters :

   a.   Presentation
   b.   Neatness
   c.   Content

3. NCERT : Do all examples of Ch 1,2 and 6

Where to do: In practice notebook

Parameters:

   a.   Content
   b.   Accuracy

NOTE:- Dear students
          Please record a video of your activity, and the best one will be displayed in class.

4.   Perform the activity given below.
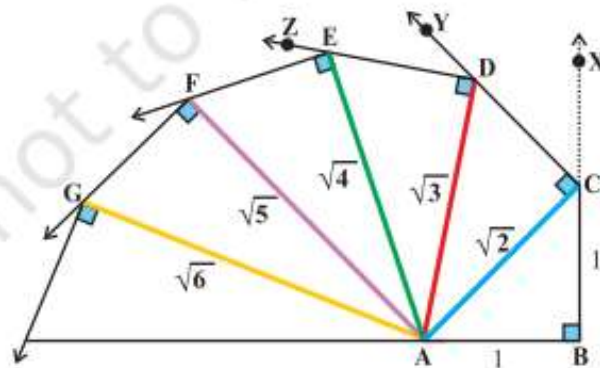
Activity 1

OBJECTIVE

To construct a square-root spiral.

MATERIAL REQUIRED

Coloured threads, adhesive, drawing pins, nails, geometry box, sketch pens, marker, a piece of plywood.

METHOD OF CONSTRUCTION

1. Take a piece of plywood with dimensions 30 cm × 30 cm.

2. Taking 2 cm = 1 unit, draw a line segment AB of length one unit.

3. Construct a perpendicular BX at the line segment AB using set squares (or compasses).

4. From BX, cut off BC = 1 unit. Join AC.

5. Using blue coloured thread (of length equal to AC) and adhesive, fix the thread along AC.

6. With AC as base and using set squares (or compasses), draw CY perpendicular to AC.

7. From CY, cut-off CD = 1 unit and join AD.

8. Fix orange coloured thread (of length equal to AD) along AD with adhesive.

9. With AD as base and using set squares (or compasses), draw DZ perpendicular to AD.

10. From DZ, cut off DE = 1 unit and join AE.

11. Fix green coloured thread (of length equal to AE) along AE with adhesive [see Fig. 1].

   Repeat the above process for a sufficient number of times. This is called "a square root spiral".

DEMONSTRATION

1. From the figure, $AC^2 = AB^2 + BC^2 = 1^2 + 1^2 = 2$ or $AC = \sqrt{2}$.

   $AD^2 = AC^2 + CD^2 = 2 + 1 = 3$ or $AD = \sqrt{3}$.

2. Similarly, we get the other lengths AE, AF, AG ... as $\sqrt{4}$ or 2, $\sqrt{5}$, $\sqrt{6}$ ....

OBSERVATION

On actual measurement

   $AC =$ ...... , $AD =$ ......, $AE =$ ...... , $AF =$ ...., $AG =$ ......

   $\sqrt{2} = AC =$ .... (approx.),

   $\sqrt{3} = AD =$ .... (approx.),

   $\sqrt{4} = AE =$ .... (approx.),

   $\sqrt{5} = AF =$ .... (approx.)

APPLICATION

Through this activity, existence of irrational numbers can be illustrated.

DELHI PUBLIC SCHOOL, JAMMU

SESSION -2023-24

HOLIDAY HOMEWORK

SUBJECT-BIOLOGY CLASS- IX

✟ **REPORT: Make a report on structural organization of a Plant cell and an Animal cell.**

✟ **ACTIVITY:** *To show the process of Endosmosis & Exosmosis in Raisins.*

Links: 1.https://youtu.be/AYHELMy1kWI

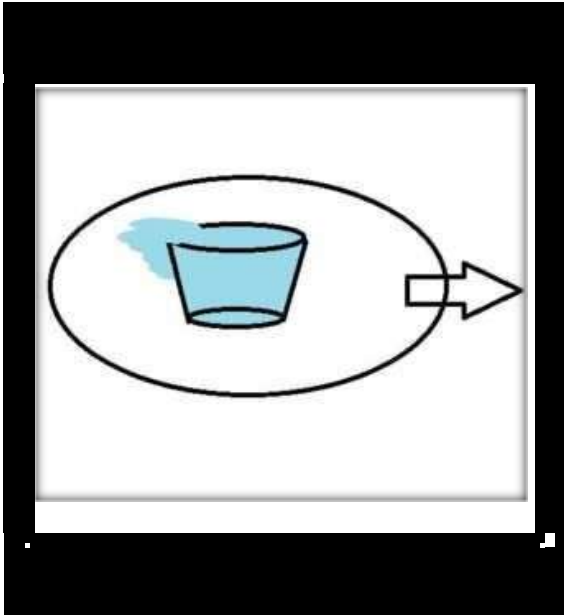2. https://youtu.be/HKXMyht6h5Y

Note:

The Activity should be done manually and the project should be handwritten and done on a file (A4 size sheets) with proper acknowledgement, certificate and bibliography.
*For performing activity, you can take help from given YouTube links.
*Submit your Holiday Homework to your respective Subject Teacher. Your submission will carry 10 marks. (5 marks- Content & Research,3marks- Presentation, 2 marks creativity).

Perform an activity which asks us to place a tumbler (glass) full with water on a tray

and turn around as fast as you can and then see if water spills and why?

Perform this activity and prepare a project report.

The project report should include;
1. Observations of why water spilled on tray.?
2. Which type of inertia causes this spillage of water?
3. Explain how it is related to Newton's first law of motion? 4. Observe which type of force is included during spillage on tray?

Link for the above activity : https://youtu.be/5v-HuRtUX0Q

Note: *The activity should be done manually and the project should be handwritten and done on*

a file with a proper acknowledgement, certificate and bibliography.

DELHI PUBLIC SCHOOL, JAMMU
SESSION-(2023-24)
HOLIDAYS HOMEWORK

CLASS-IX   **SUBJECT- CHEMISTRY**

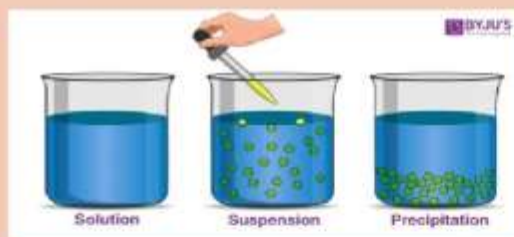- **REPORT: MAKE A REPORT ON THE PROPERTIES OF TRUE SOLUTION, SUSPENSION AND COLLOIDAL WITH SUITABLE EXAMPLES .**

- **ACTIVITY:**
  To Prepare:
  - A true solution of common salt and sugar in water.
  - A suspension of soil and fine sand in water.
  - A colloidal solution of starch in water and egg albumin/milk in water and distinguish between these on the basis of:
    - Transparency
    - Filtration criterion
    - Stability

  Procedure:

  - <u>For true solution:-</u>Mix common salt with water in one glass and mix sugar with water in another glass.
  - <u>For suspension:-</u> Mix soil with water in one glass and mix fine sand with water in another glass.
  - <u>For colloidal solution:-</u>Mix starch with water in one glass and mix milk/egg albumin with water in another glass.
    Now take one sample from each type of solutions and compare on the basis of
  - Transparency
  - Filterability
  - Stability
    - Write your observations in tabular form.

Solution   Suspension   Precipitation

- YouTube link:- https://youtu.be/ZG4X5WmnDGg

NOTE:
- The observations of the activity and the project should be handwritten and done on a file* (A4 size sheets) with proper acknowledgement, certificate and bibliography.
- Submit your Holiday Homework to your respective Subject Teacher by July, 2023.Your submission will carry 10 marks.

Class: IX   **Subject: Social Science**

Make a project report on the following topics- (Do any One)
1. Earthquake-Causes and Mitigation.
2. Flood – Causes and Mitigation.
3. Global Warming-Causes and Mitigation.

1. Project on the various farming and non- farming activities taking place in your union Territory. Also find out about the different types of crops grown in your area during the year.

Note- The project should be handwritten and done on a file.

Do any one out of Political Science and History

Political Science

Make a project file on 'Democracy v/s Dictatorship'.
Do the case study of six different countries
Note: Work to be done on A4 size sheet

OR

1. Draw or paste symbols used by French People at the time of Revolution.
2. Write Declaration of Rights

Note: Work to be done on A4 size sheet

Note -
1. Submit your Holiday Homework to respective Subject Teacher by 22th of July, 2023 Your submission will carry 4 marks. (2 marks- Subject Relevance & Research, 2 marks- Handwriting).

2. Practice for your Homework/ Project Presentation (5-6mins) to be held after holidays. It will carry 6 marks.
(2 marks- Confidence, 2 marks- Subject Clarity, 2 marks- Presentation Skills).