

**AIR FORCE SCHOOL JAMMU**  
**SESSION 2022-23**  
**HOLIDAY HOMEWORK**  
**CLASS IX**

SUBJECT	HOMEWORK
ENGLISH	<p><b>DO ANY THREE</b></p> <p>1. Several UFOs have been sighted over the years. Try to get more information from the Internet. Write about five sightings and write whether you believe in these sightings. Why/why not? Present your project to the entire class (100-150 words)</p> <p>2. TWIST THE TALE (word limit 100-120 words)</p> <p>Create an alternate ending of any one of the following prozes:</p> <ul style="list-style-type: none"><li>● The Lost Child</li><li>● The Fun They Had</li></ul> <p><b>3. TREAT YOUR FAMILY</b></p> <p>Pick any of your favourite meals (snacks/dessert/main course) and cook it with your mother/father. Write down all ingredients required to make it and the steps of cooking. Treat your family members and write a short paragraph on how you felt about it. (100-150 words)</p> <p><b>4. POETRY CORNER</b></p> <p>Convert the prose 'The Sound of Music' - Evelyn Glennie into a creative poem.</p> <p>How to do: The poem should include all the aspects of Evelyn's journey from being a non- entity to an epitome of inspiration for all other children like her.</p> <p>It should be 3 -4 stanzas.</p> <p><b>Be original, creative and use imagery.</b></p> <p>5. Add Word of the day as a regular practice in your notebook... the last 10 pages of the notebook can be used.</p>

क) निम्नलिखित विषयों पर 100 शब्दों में अनच्छेद लिखिए।

1. मेक इन इंडिया अभियान
2. आतंकवाद : समस्या और समाधान
3. दिनों दिन बढ़ती महंगाई के बढ़ते चरण
4. आत्मविश्वास और घमंड

ख) अनौपचारिक पत्र लिखिए।

1. विद्यालय में होने वाले वार्षिकोत्सव में आपको परस्कृत किया जाएगा। आप चाहते हैं कि आपकी माता जी भी इसे देखें। इस अवसर पर उन्हें बलाने के लिए पत्र लिखिए।
2. अपने मित्र को 'स्वच्छता अभियान' का हिस्सा बनने के लिए निमंत्रण पत्र लिखिए।
3. बुरी संगति से बचने की प्रेरणा देते हुए छोटी बहन को पत्र लिखिए।
4. अपने विद्यालय में आयोजित वृक्षारोपण समारोह का वर्णन करते हुए मित्र को पत्र लिखिए।

ग) निम्नलिखित विषयों पर संवाद लिखिए (40-60 शब्दों में)

1. त्योहारों का हमारे जीवन में महत्व व उनके संदेश पर बातचीत करते हुए दादाजी और पोती के संवाद को लगभग 50 शब्दों में लिखिए।
2. आपके पैर में चोट लगी है मां द्वारा कारण पूछे जाने पर उनसे होने वाले संवाद को लिखिए।
3. जीवन केवल सखों की राह नहीं इस विषय पर पिता पत्र के बीच हुए संवाद को लिखिए।
4. दो व्यक्तियों के बीच भ्रष्टाचार को लेकर होने वाली बातचीत को लिखिए।

घ) संधि की परिभाषा देते हुए संधि के भेदों का नाम एवं स्वर संधि के विभाग उदाहरण सहित लिखिए।

ङ) विराम चिह्न की परिभाषा देते हुए विभिन्न विराम चिह्न को उदाहरण सहित समझाइए।

च) 30 उपसर्ग 30 प्रत्यय लिखें

नोट: सभी कार्य नई उत्तरपस्तिका में साफ और

सुंदर लिखें व याद करें पढ़ाए गए समस्त पाठों को याद करें।

<p>SANSKRIT</p>	<p>1. पञ्च अपठित गद्यांश 80-100 शब्दपरिमितः गद्यांशानाम अभ्यासं कुरु । रचनात्मक कार्यम्</p> <p>2. सङ्केताधारितम् औपचारिकम् अथवा अनौपचारिक पत्रलेखनम् - पितरं प्रति पत्रं (शैक्षिक भ्रमणार्थं ) मित्र प्रति पत्रम् ( गणतन्त्रता दिवसस्य शोभा यात्रा ) सखी प्रति पत्रम् (प्रदूषण करणानि)</p> <p>3.अनुच्छेदलेखनम् - पर्यावरणम् ' अम्बा , अनशासन , 4 पोर्टफोलियो</p> <p>5 आर्ट इनटिग्रेटेड एकटीवीटि :- तमिलनाडु पर्यावरण त्योहार भोजनस्य च विषये लिखत ।</p>
<p>MATHS</p>	<p>1.LAB MANUAL ACTIVITY: To represent various rational numbers on number line.</p> <p>2. ART INTEGRATED ACTIVITY: Draw any creature by using square root spiral like Hermits crab etc</p> <p>3. Do the assignment on Number System and Polynomials on the assignment notebook.</p> <p>4.Prepare folder for MATHS Portfolio.</p>
<p>SCIENCE</p>	<p><b>CHEM:-</b> 1) Prepare a 3D model depicting structure of atom (based on BOHR'S MODEL OF ATOM)</p> <p>2) Prepare a chart of elements (upto 30 atomic number) with their SYMBOLS, ATOMIC NUMBER and VALENCY.</p> <p><b>PHYSICS :-</b> 1) Observe the electric metre installed in your house. Take the readings of meter each day at 9am and 9 pm. Note down the UNITS consumed during day time and night time separately. Do this activity for a week. Tabulate your observations. Draw inferences from the data.</p> <p>2) Make a model of SAND CLOCK which can measure a time interval of 2 minutes.</p> <p><b>BIO:-</b> 1) Plant a tree sapling in a pot. Click picture of yourself while planting. Observe the changes in plant on weekly basis, maintain a record of your observations. Paste pictures showing comparative growth of plant. Prepare a write on the values that you inculcated by taking care of a plant.</p> <p>2) Find out which molecules cause GLOBAL WARMING . Paste news articles talking about THE IMPACT OF GLOBAL WARMING ON ALL LIVING FORMS and prepare a brief write up on your individual contribution in minimising the impact of GLOBAL WARMING.</p> <p>3) Prepare a chart based on comparative study of PLANT CELL AND ANIMAL CELL with diagrams and points of difference. <b>(OR)</b> Prepare a chart depicting TYPES OF ANIMAL TISSUES.</p>

<p>SOCIAL SCIENCE</p>	<p><b><u>HISTORY</u></b></p> <p>1. prepare the time line of French revolution and Russian revolution  2. Map Work : locate the political map of France  Paris  Marseilles  Nintendo  Bordeaux</p> <p><b><u>CIVICS</u></b> :</p> <p>Prepare a chart and highlight the similarities and differences between South African and Indian Constitution.</p> <p><b><u>GEOGRAPHY</u></b> :</p> <p>1.PROJECT WORK : Disaster Management.  2. Map Work: Physical Features of India(Location and labelling) - Mountain Ranges: The Karakoram, The Zaskar, The Shivalik, The Aravali, The Vindhya, The Satpura, Western &amp; Eastern Ghats  Mountain Peaks – K2, Kanchan Junga, Anai Mudi  Plateau - Deccan Plateau, Chotta Nagpur Plateau, Malwa Plateau  Coastal Plains - Konkan, Malabar, Coromandal &amp; Northern Circar.</p> <p><b><u>ECONOMICS</u></b> - Visit nearby rural or village and ask them about cropping pattern , irrigation facility.....</p>
<p>IT</p>	<p><b><u>FOR ROLL NO: 1 to 12</u></b></p> <p>Collect the data of different Stores (Vishal Mega Mart, Easy Day, Any grocery shop, Stores in Mall, Beauty Product stores etc.)  Data to be collected:</p> <ol style="list-style-type: none"> <li>How do they procure things for the store?</li> <li>How do they manage the placement of things?</li> <li>How do they keep records of the inventory?</li> <li>How do they manage shifts of their employees?</li> <li>How do they make billing and give discounts to their customers?</li> <li>Reward points concept.</li> </ol> <p>You have to collect the sample data and everyone should make a power point presentation for the same.  If not a power point presentation then all the collected data should be presented on A4 interleaf paper with proper tables and synopsis.</p> <p><b><u>FOR ROLL NO: 13 TO 24</u></b></p> <p>Collect the information on how a School Management System works (Student Data, Staff Data, Salary etc.)</p> <ol style="list-style-type: none"> <li>Collect information on how students' data are being managed.</li> <li>Collect information on how teachers' data are being managed.</li> <li>Collect how a school manages the salary distribution.</li> </ol> <p>You have to make a power point presentation of collected data.  If not a power point presentation then all the collected data should be presented</p>

on A4 interleaf paper with proper tables and synopsis.

**FOR ROLL NO: 25 TO 36**

Collect the information on how a bank management system works.

- a. Collect data of a bank(accounts, services etc.)
- b. Collect information on how a bank manages the transactions.
- c. Check different transaction rates and different loans.

You have to make a power point presentation of collected data.

If not a power point presentation then all the collected data should be presented on A4 interleaf paper with proper tables and synopsis.

## **MATHEMATICS**

**Q1. Prepare a working model based on representation of irrational numbers on number line**

(Reference link :

<https://utopper.com/cbse/cbse-lab-manual/cbse-lab-manual-class-9/class-9-maths-lab-manual-activity-2-represent-some-irrational-numbers-on-the-number-line/> )

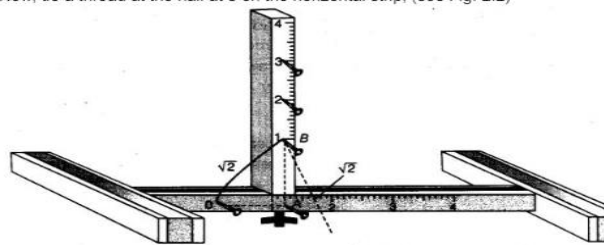
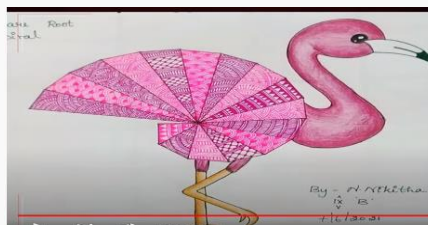
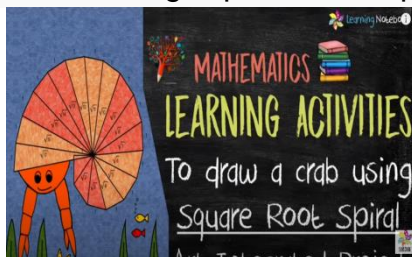


Fig. 2.2

**Q2. Maths Art Integrated Activity: To Draw Hermit Crab or any other creature by Constructing Square Root Spiral in nature**



**Q3. Do any one of the following projects;**

- (a) Origin and development of Number System
- (b) Historical details of zero
- (c) Quick technique to calculate the square of any no (less than 100) ending with digit 5
- (d) Mathematics behind metro routes
- (e) Mathematics through newspapers

**Worksheet**

1. If  $8^{x+1}=64$ , what is the value of  $3^{2x+1}$ ?
2. Represent  $\sqrt{6}$ ,  $\sqrt{7}$  &  $\sqrt{8}$  on the number line.
3. Is the expression  $3\sqrt{t} + t\sqrt{2}$  polynomial in one variable or not? Give reasons.
4. Use factor theorem to determine that  $x-3$  is factor of  $x^3 - 4x^2 + x + 6$
5. Insert 10 rational numbers between  $-3/11$  and  $8/11$
6. Express each in p/q form:

- a)  $15.\overline{725}$                       b)  $8.\overline{0025}$                       c)  $25.\overline{6875}$                       d)  $0.\overline{585}$   
e)  $23.43$

7. . Simplify the following expressions:

- a)  $(\sqrt{3} + \sqrt{7})^2$                       b)  $(\sqrt{5} - \sqrt{3})^2$                       c)  $(2\sqrt{5} + 3\sqrt{2})^2$

8. Find the remainder when  $f(x) = x^3 - 6x^2 + 2x - 4$  is divided by  $g(x) = 1 - 3x$
9. Solve  $[(\sqrt{5} - 2)/(\sqrt{5} + 2)] - [(\sqrt{5} + 2)/(\sqrt{5} - 2)]$
- 10

.. Simplify :

(i)  $[1/(1+\sqrt{2})] + [1/(\sqrt{2}+\sqrt{3})] + [1/(\sqrt{3}+\sqrt{4})] + [1/(\sqrt{4}+\sqrt{5})]$

(ii)  $\frac{4+\sqrt{5}}{4-\sqrt{5}} + \frac{4-\sqrt{5}}{4+\sqrt{5}}$

11. If  $(x + 5)$  is a factor of  $x^3 + 2x^2 - 13x + 10$ , find other factors
12. Without actual division, prove that  $2x^4 - 6x^3 + 3x^2 + 3x - 2$  is exactly divisible by  $x^2 - 3x + 2$ .
13. Find the value of k if  $x-3$  is a factor of  $k^2 x^3 - kx^2 + 3kx - k$
14. If  $x = 3 + \sqrt{8}$ , find  $x^2 + (1/x^2)$

15.

Show that:

$$\frac{1}{3 - \sqrt{8}} - \frac{1}{\sqrt{8} - \sqrt{7}} + \frac{1}{\sqrt{7} - \sqrt{6}} - \frac{1}{\sqrt{6} - \sqrt{5}} + \frac{1}{\sqrt{5} - 2} = 5$$

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If a, b and c are rational numbers, find their values in each of the following

i.  $\frac{5+2\sqrt{3}}{7+4\sqrt{3}} = a + b\sqrt{3}$

ii.  $\frac{\sqrt{2}+\sqrt{3}}{\sqrt{18}-\sqrt{12}} = a - b\sqrt{6} + c\sqrt{3}$