

DA.V. Public School, Bariatu, Ranchi-9

Holiday homework

Class-9 (2024-25)

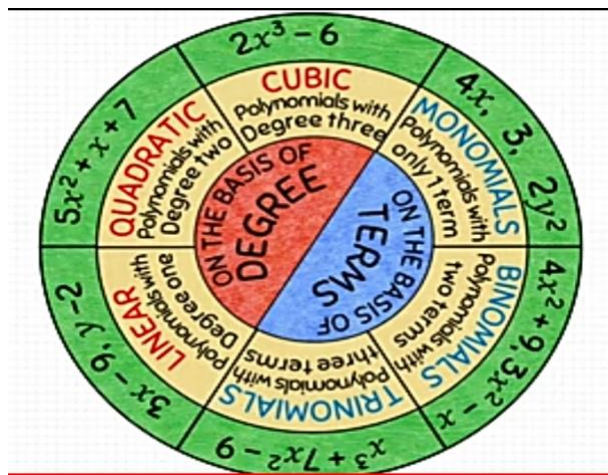
Mathematics

Part:- 1

- Express  $1.323232... + 0.353535...$  as a fraction in simplest form.
- If  $x = 2 + \sqrt{5}$  prove that  $x^2 + \frac{1}{x^2} = 18$ .
- If  $a+b+c = 0$  then find the value of  $\frac{a^2}{bc} + \frac{b^2}{ac} + \frac{c^2}{ab}$ .
- Find two irrational number between  $\sqrt{3}$  and  $\sqrt{2}$ .
- Find five rational numbers between  $-\frac{2}{3}$  and  $\frac{3}{4}$ .
- If  $(x-2)$  and  $(x-\frac{1}{2})$  both are factors of  $px^2 + 5x + r$  then show that  $p = r$
- Simplify:-  $(2x - 5y)^3 - (2x + 5y)^3$
- Prove that  $(a+b+c)^3 - a^3 - b^3 - c^3 = 3(a+b)(b+c)(c+a)$ .
- Find 'a' and 'b' if  $\frac{5+\sqrt{3}}{\sqrt{5}-\sqrt{3}} = \frac{1}{2}a + 3b\sqrt{15}$ .
- Find the value of  $x^3 + y^3 + z^3 - 3xyz$  if  $x^2 + y^2 + z^2 = 83$  and  $x+y+z = 15$

Art integrated activity

- Show types of polynomials on the basis of their degree 0,1,2,3,4 and infinity using colour paper. Take the help of the given picture.



- Form square root spiral using different colour papers.

13. Take four strings of different sizes and paste each of them in a circular form on a plane paper to form four circles. Prepare a table as given below to find ' $\pi$ '

Circle number	Circumference ©	Diameter (d)	c/d
1			
2			
3			
4			
			Average =

14. Paste pictures of three Indian mathematician on A4 size thick paper and write two lines about each of them for their contribution in the field of mathematics.

**Part:-2 (Multiple choice questions)**

15.  $(256)^{0.16} \times (256)^{0.09} = ?$   
a) 4                      b) 16                      c) 64                      d) 256.25
16. If  $9x^2 - b = \left(3x + \frac{1}{2}\right)\left(3x - \frac{1}{2}\right)$ , then the value of 'b' is  
a) 0                      b)  $\frac{1}{\sqrt{2}}$                       c)  $\frac{1}{4}$                       d)  $\frac{1}{2}$
17. The co-efficient of 'x' in  $(x+3)^3$  is  
a) 1                      b) 9                      c) 18                      d) 27
18. Which of the following is a factor of  $121 - 2ab - (a^2 + b^2)$  is  
a)  $11-a+b$                       b)  $11+a-b$                       c)  $11-a-b$                       d) none of these
19. If  $(x+1)$  is a factor of the polynomial  $2x^2 + kx$ , then  $k = ?$   
a) -2                      b) -3                      c) 4                      d) 2

**Part:-3**

**DIRECTION:-** In the question number 20 and 21 a statement-1 of assertion followed by a Statement-2 of reason.

Choose the correct option

20. Statement -1 (Assertion) :- If  $x = 1 + \sqrt{2} + \sqrt{3}$  and  $y = 1 + \sqrt{2} - \sqrt{3}$ , then  $xy = 6 + 2\sqrt{2}$

Statement-2 ( Reason) :-  $(a + b)(a - b) = a^2 - b^2$

- Statement-1 and statement-2 are true, statement-2 is correct explanation for statement-1.
- Statement-1 and statement-2 are true, statement-2 is not a correct explanation for statement-1.
- Statement-1 is true, statement -2 is false.

d. Statement-1 is false, statement-2 is true.

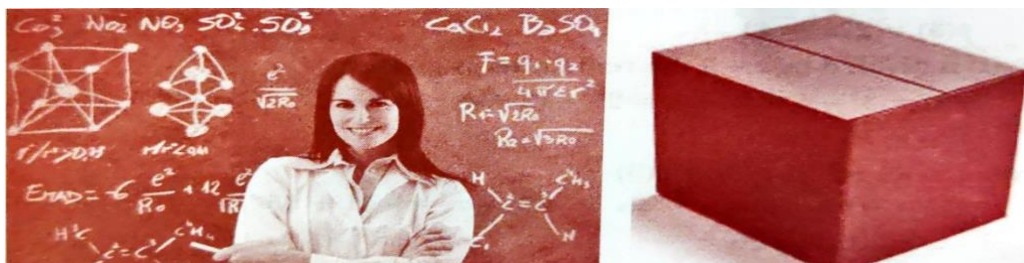
21. Statement -1 (Assertion):- The decimal representation of  $\frac{3}{8}$  is terminating..

Statement -2 (Reason) :- If the denominator of a rational number is of the form  $2^m \times 5^n$ , where m, n are non – negative integers , then its decimal representation is terminating.

- Statement-1 and statement-2 are true, statement-2 is correct explanation for statement-1.
- Statement-1 and statement-2 are true, statement-2 is not a correct explanation for statement-1.
- Statement-1 is true, statement -2 is false.
- Statement-1 is false, statement-2 is true.

#### Part-4:- (Case based study question)

22. To recapitulate the concept of polynomials a teacher bought a box with some slips of polynomial written on them in the class. She asked the students to pick a slip turnwise and say any four lines about the polynomial written on it.



Based on above information answer the following questions.

- The polynomial written on Ram's slip was  $p(t) = 4t^2 - 9 + t$ . What is the value of  $p(2)$  ?  
 i) 4                      ii) -4                      iii) -9                      iv) 9
- Shyam got the polynomial  $p(x) = 1 - x^2$ . What is the degree of the polynomial?  
 i) 1                      ii) 2                      iii) 3                      iv) 0
- Varun got the polynomial  $p(y) = y^2 - 5y + 6$ . Calculate the value of  $p(-1)$ .  
 i) 6                      ii) -6                      iii) 12                      iv) -12
- One of the slips had polynomial  $x^3 - 6x^2 + 11x - 6$  written on it. It's factors are  
 i)  $(x-1)(x+2)(x+3)$                       ii)  $(x-1)(x-2)(x-3)$   
 iii)  $(x+1)(x+2)(x-3)$                       iv) none of these

नवमी कक्षायाः गृहकार्यम्

1.प्रत्येकपाठस्य अन्ते “ एहि हसामः “ अस्ति। मित्रैः सह अथवा परिवारेण सह मिलित्वा संवादस्य विडियोनिर्माणं कृत्वा कक्षासमूहे प्रेषयन्तु।

2.दूरदर्शने ( DD News) वार्तावली इत्याख्यः संस्कृतकार्यक्रमः(7:30) सार्ध

सप्तवादने प्रातः रविवासरे भवति। तम् अवश्यं दृष्ट्वा स्व ज्ञानसंवर्धनं कुर्वन्तु।

3.एकस्मिन् विषये मौलिकलेखनम्-

देशः, माता ,पिता ,गुरुः ,विद्या, ,

अनुशासनम्, समयस्य सदुपयोगः

4.भित्तिपत्रिकायां ( चार्ट पेपर में) पाठ्यम् पाठतः सूक्तिलेखनम् ।

एकम् अथवा द्वयं श्लोकं सुसज्जितं कृत्वा लिखन्तु।

## Class 9 Science (Biology)

1. Make a 3D model of a plant or animal cell with biodegradable materials.  
Use flag labelling.

2. Soak some dry and swollen resin in

A) salt solution in a bowl

B) in a bowl containing water

Write your observations and draw the necessary diagrams.

3 .Make an attractive concept map on cell organelles and their functions.



**DAV PUBLIC SCHOOL BARIATU**  
**HOLIDAY HOMEWORK**  
**SUBJECT: SOCIAL SCIENCE**  
**CLASS: IX**

Make two Stick File

One for History/ Political science

One for Geography/ Economics / Disaster Management

**History**

- 1) Assertion (A) Robespierre's Government issued laws placing a maximum ceiling on wages and prices.

Reason (R) Peasants were forced to transport their grain to the cities and sell it at prices fixed by the Government.

- 1) Both A and R are true and R is the correct explanation of A
- 2) Both A and R are true and R is not the correct explanation of A
- 3) A is correct but R is wrong
- 4) A is wrong but R is correct

Q2) Download the political map of France and locate the following:-

- 1) Nantes 2) Bordeaux 3) Marseilles 4) Paris

Q3) The French revolution saw the introduction of more than one Constitution. The National Assembly introduced the constitution in 1791. This is not a perfect constitution and many segments of society had grievances with it

- 1) How many times constitution framed in France collect the dates and one important features of each

Q4) Which of the following statement is true.

- 1) Peasants, Artisans and women were not allowed to enter to the Assembly.
- 2) Peasants, Artisans and Women were allowed to enter to the Assembly.
- 3) The representative of 1<sup>st</sup> and 2<sup>nd</sup> Estate were not allowed to enter the Assembly
- 4) King and Peasant were allowed to enter the Assembly

Q5. Identify the pictures:-



Q6. Identify the pictures:-



## Political Science

1. The Government of North Korea headed by KIM JONG UN is not a democratic government. Justify the statement with the four features of democracy.

2. Identify the picture

A)



What does this image represent?

B)



What do money signify here?

C)



Identify which features of democracy is represents here?

	<b><u>Geography:-</u></b>
1	<p>→ On an outline map of India locate the following:</p> <p>★ <b><u>Chapter -1: India-Size and Location</u></b></p> <p>i. India-States with Capitals, Tropic of Cancer, Standard Meridian (Location and Labelling)</p>
2	<p>★ <b><u>Chapter -2: Physical Features of India</u></b></p> <p>ii. Mountain Ranges: The Karakoram, The Zasker, The Shivalik, The Aravali, The Vindhya, The Satpura, Western &amp; Eastern Ghats</p> <p>iii. Mountain Peaks – K2, Kanchan Junga, AnaiMudi</p> <p>iv. Plateau – Deccan Plateau, Chota Nagpur Plateau, Malwa Plateau</p> <p>v. Coastal Plains – Konkan, Malabar, Coromandel &amp; Northern Circar (Location and Labelling)</p>
3	<p>→ <b><u>“India and Pakistan 2025”</u></b> Disaster Management Project :</p> <p>➤ Follow CBSE guidelines strictly.</p> <p>➤ Use A-4 size file paper (one side ruled)</p> <p>➤ Use blue or black ink to write your project.</p> <p>➤ Design the cover page in such a way that it reflects your topic.</p> <p>➤ Write Topic of the project, Name, Class and Sec, Roll no. on the cover page in bold letters.</p> <p>➤ Use bottom space for your Name, Class and sec, Roll no.</p>



	<ul style="list-style-type: none"> <li>➤ However, the project work should not be of less than 15 pages (including the cover page)</li> <li>→ Topics Included: <ul style="list-style-type: none"> <li>➤ Designing the cover page</li> <li>➤ Writing acknowledgement</li> <li>➤ Making Index page</li> <li>➤ Introduction Page “<u>India and Pakistan war 2025</u>”</li> <li>➤ Background of “<u>India and Pakistan war</u>”</li> <li>➤ Role of India</li> <li>➤ Role of the United Nations.</li> <li>➤ <u>Economic and Environmental consequences Of "India and Pakistan war"</u></li> <li>➤ Do's and Don'ts</li> <li>➤ Conclusion</li> <li>➤ Bibliography</li> <li>➤ Remarks.</li> </ul> </li> </ul>
4	<ul style="list-style-type: none"> <li>→ Answer the following questions -:</li> <li>→ The Easternmost longitude of India is a) 97°25” E b) 68°7” E c) 77°6” E d) 82°32” E</li> <li>→ 2. Indian standard meridian does not pass from one of the following states. a) Tamil Nadu b) Andhra Pradesh c) Chhattisgarh d) Orissa</li> <li>→ 3. Uttarakhand, Uttar Pradesh, Bihar, West Bengal and Sikkim have common frontiers with. a) China b) Bhutan c) Nepal d) Myanmar</li> </ul>

## Economics

### Chapter 1: The Story of Village Palampur

#### Summer Holiday Homework: Economics - The Story of Village Palampur (Class 9)

#### Instructions:

\* Attempt all questions thoughtfully and meticulously.

\* Ensure your answers are well-supported with examples and reasoning where necessary.

\* For the Project Work, be creative and present your findings clearly.

**A. Competency Based Questions (Focus on Application and Analysis - Approximately 30% Weightage)**

1. Imagine a scenario where the government decides to significantly increase investment in infrastructure (roads, electricity, irrigation) in Palampur. How would this likely impact the following aspects of the village economy? Explain with reasons for each:

- a. Farming activities
- b. Non-farming activities
- c. Employment opportunities
- d. The overall standard of living of the villagers
- e. Palampur demonstrates the importance of both human capital and physical capital in production.
- f. Identify examples of both types of capital present in the village.

2. Analyze how an improvement in either human capital (e.g., education, healthcare) or physical capital (e.g., better tools, machinery) could lead to increased productivity in Palampur.

- a. The concept of multiple cropping is highlighted in the story.
- b. What are the advantages of practicing multiple cropping in a region like Palampur?
- c. Can you think of any potential disadvantages or challenges associated with intensive multiple cropping?

**3. Source/Case Based Questions (Focus on Interpretation and Evaluation - Approximately 30% Weightage)**

Read the following excerpt carefully and answer the questions that follow:

"Unlike in the past, when farming was largely a subsistence activity, in Palampur, the aim is to produce surplus to sell in the market. This has been made possible due to various factors, including the introduction of High Yielding Variety (HYV) seeds, chemical fertilizers and pesticides, and improved irrigation facilities. Farmers are also increasingly using tractors and other modern machinery to plough and harvest their fields faster."

A. What significant shift in the nature of farming in Palampur is highlighted in this excerpt? What factors have contributed to this change?

B. Based on the excerpt, what are some of the key inputs and technologies that have enabled farmers in Palampur to increase their production?

C. Do you think this shift towards market-oriented farming and the use of modern inputs has only positive consequences? What could be some potential negative impacts on the environment or the social fabric of the village?

#### 4. Conceptual Questions (Focus on Understanding and Explanation)

A. Define the following terms in the context of the chapter "The Story of Village Palampur":

- \* Factors of Production
- \* Fixed Capital
- \* Working Capital
- \* Green Revolution

B. Explain the role of non-farm activities in the economy of Palampur. Give at least three examples of such activities and briefly describe their significance.

C. Discuss the importance of organization of production. What are the essential requirements for the production of goods and services in any economy, as illustrated by the example of Palampur?

#### 5. Project Work (Focus on Research, Creativity, and Presentation)

##### **Option 1: A Day in the Life**

Imagine you are a small farmer or a non-farm worker in Palampur (e.g., a dairy farmer, a shopkeeper, a transport operator). Write a diary entry for a typical day, describing your activities, challenges, and contributions to the village economy. You can include sketches or illustrations to make your diary more engaging.

##### **Option 2: Comparing Villages**

Research a village in your own region or any other region you are familiar with. Compare and contrast its economic activities, infrastructure, and standard of living with that of Palampur as described in the chapter. Present your findings in the form of a short report with relevant data or visual aids (charts, pictures).

##### **Assessment Guidelines:**

\* **Competency Based Questions:** Focus on the depth of analysis, application of concepts, and logical reasoning.

\* **Source/Case Based Questions:** Emphasis on accurate interpretation of the provided text, critical evaluation, and well-supported inferences.

\* **Conceptual Questions:** Assessment of understanding of key economic terms and concepts, and the ability to explain them clearly.

\* **Project Work:** Evaluation based on the effort invested in research, creativity in presentation, understanding of the economic activities, and clarity of communication.

## **Holiday Homework(Summer break)**

### **English (ClassIX)**

#### **1.Read the following text.**

1. There are various beliefs in the society as to what should be eaten and what should not be eaten to keep healthy. If one has high one is told to cut down on or stop consuming sodium. A new study from Boston University reveals that low sodium does not actually cause low blood pressure. A little salt is part of a healthy food plan. The study has shown that the people with the lowest intake of sodium along with the ones who have the highest intake of sodium have a greater risk of heart disease than the people in the middle.

2. There is a theory that drinking post infancy is unnatural. It is true that humans are the only species to drink milk as adults. Research shows that we have genetically evolved to adapt to it. Milk products actually play an important role in keeping us healthy. Dairy products are rich in whey, protein, linoleic acid and calcium.

3. Fat in general is not a bad thing. The community is still debating the benefits of saturated fats. The other types of fats taken in moderation are good for us. Plant-based fats such as mono-saturated fats found in foods like almonds, avocado and omega-3 fatty acids found in fish offer many health benefits. These fats may reduce inflammation and improve the quality of blood.

4. It may seem that diet products such as light salad dressing are healthier choices to eat but often they are really not. Healthy food like this used to be popular, but many of these products remove the fat and replace it with added sugar. Large amounts of added sugar in the diet may be even more damaging to health than excessive dietary fat. A major study from CDC showed that people who consumed a lot of sugar were more than twice likely to die from heart disease. If you opt for a higher food, check the ingredients and food label to make sure that the fats have not been replaced with added sugar. We must study the reports of various researches before adopting any new mode of eating or food habit otherwise the result of the food plan may be opposite of what is expected.

**Based on your understanding of the passage, answer the following questions.**

**(i) The reason why we should consume dairy products, is:**

- (a) they are rich in protein and calcium.
- (b) they are tasty and tempting.
- (c) they are good for heart.
- (d) they are not very expensive.

**(ii) Which type of people have a greater risk of disease?**

- 1. People with no intake of salt.
- 2. People with the lowest intake of salt.
- 3. People with moderate intake of salt.
- 4. People with the highest intake of salt.
- 5. People who have multiple complications.

- (a) 1 and 3
- (b) 2 and 3
- (c) 4 and 5
- (d) 2 and 4

**(iii) Plant-based fats are good because they:**

- (a) improve the quality of blood.
- (b) improve appetite.
- (c) strengthen mind and body.
- (d) improve heart beats.

**(iv) The word 'prevalent' in the first paragraph of the passage means:**

- (a) most uncommon.
- (b) most common.
- (c) unconventional.
- (d) important.

**(v) What is more damaging to health than excessive dietary fat?**

- (a) A lot of added sugar in diet.
- (b) No sugar intake.
- (c) Eating saturated fat frequently.
- (d) No fat intake.

**(vi) Mono-saturated fats are found in food like:**

- 1.milk products
- 2.sugar
- 3.almonds
- 4.oil
- 5.Avocado

- (a) 1 and 4
- (b) 3 and 5
- (c) 2 and 4
- (d) 2 and 3

**(vii) The phrase 'added sugar' in the last paragraph refers to sugars added during the:**

- (a) cooking of food.

- (b) eating of food.
- (c) processing of food.
- (d) production of sucrose.

**(viii) What does the first paragraph of the passage suggest?**

**(ix) The passage focuses on the importance of.....**

**(x) What does the term 'Eating something in moderation' mean?**

**Q2) Create a pictorial depiction** to depict the challenges faced by marine life due to human activities and suggest three sustainable solutions to protect life under water. Include labels and a short explanation (2–3 sentences) for each part of your artwork."(Sustainable development goals)

**Q3) WRITE 5 slogans** related to "Importance of Education."

**Q4) Critical Thinking:**

Why do you think the grandmother was so determined to learn how to read at her age? What does this tell you about her character?

**Q5)**

**1. Inference-Based:**

What does the brook mean when it says, "For men may come and men may go, but I go on forever"?

- A. The brook dries up when men leave
- B. Nature and its elements are eternal compared to human life
- C. People can control the brook's flow
- D. The brook changes direction based on human needs

**2. Figurative Language:**

Which poetic device is used in "I chatter, chatter, as I flow"?

- A. Metaphor
- B. Simile
- C. Personification
- D. Alliteration

**3. Theme-Based:**

What central idea is expressed through the journey of the brook?

- A. Human relationships
- B. Social justice
- C. The permanence of nature and the transience of life

D. Political struggle

4. Vocabulary/Contextual Understanding:

In the poem, what does the word “bicker” most likely mean in the line “I bicker down a valley”?

- A. Argue loudly
- B. Flow noisily
- C. Stop flowing
- D. Shine brightly

5. Analytical Thinking:

Why does the poet describe the brook’s movement in so many different ways (e.g., 'chatter', 'bubble', 'babble. in and out,linger etc')?

- A. To show that the brook is confusing
- B. To highlight the monotony of its journey
- C. To emphasize the liveliness and ever-changing nature of the brook
- D. To criticize the natural world

D.A.V. Public School BARIATU, Ranchi

SUBJECT: HINDI

CLASS-NINE

Holiday homework

1. एक परियोजना कार्य तैयार कीजिए जिसमें प्रेमचंद से जुड़ा हुआ गांव का दृश्य 'दो बैलों की कथा' की जीवंत हो सके।(थर्माकोल, कोकोपीट अतिरिक्त सामग्री का प्रयोग करें)।
2. एक प्रोजेक्ट फाइल तैयार करें जिसमें अलग-अलग प्राकृतिक आपदाओं का जिक्र हो और इसकी विस्तृत जानकारी हो। ( दिनांक और वर्ष के साथ।)
3. आपने देखा होगा मीडिया द्वारा प्रस्तुत की गई घटनाएं कई बार समस्या बन जाती हैं ऐसी किसी एक घटना का उल्लेख कीजिए।

-----समाप्त-----



## **Class 9 Holiday Homework**

### **Chemistry**

#### ***Conceptual Questions:***

- 1.Explain the concept of diffusion and how it relates to the properties of matter.
- 2.Relate the changes in temperature and pressure to the states of matter.

#### ***Application based Questions:***

- 1.Explain why water droplets form on the outside of a glass containing ice.
- 2.Why do you feel cold when you put acetone on your skin?

OR

- 2.Why do people perspire on a hot, humid day?

#### ***Analysis and Evaluation Questions:***

- 1.Evaluate the importance of different states of matter in daily life.
- 2.Analyze the differences between boiling and evaporation.

#### ***Activity based:-***

- 1.Make a 3-d model of arrangements of particles of matter.

## HHW ( Physics).

(Class:-IX)

1. Create graphical representations of different types of motion, ( example:- uniform motion, non uniform motion) using real- life data.
2. Calculate the speed and acceleration of any five objects using formula:- speed= distance/time,  $a = (v - u)/t$ . ( Using real- life data).
3. A train starting from rest attains a velocity of 72 km/hour in 5 minutes . Assuming uniform acceleration, find the acceleration and distance travelled.

## **Std 9**

### **AI Assignment - I**

#### **A. ANSWER THE FOLLOWING:**

1. Write one component of Communication.
2. In the process of Communication decoding takes place at whose end?
4. In the process of Communication encoding takes place at whose end?
5. Write one factor due to which Communication can be affected.
6. The medium through which message is sent is known as?
7. When people of different \_\_\_\_\_ communicate then the chance of wrong interpretation are higher.
8. \_\_\_\_\_ is known as sharing of Information.
9. What is the purpose of Communication?
10. How do you receive Information on Phone?

#### **B. ANSWER THE FOLLOWING:**

1. What are the various elements of Communication?
2. What is Communication?
3. What is the importance of Communication?
4. What is Channel?
5. Who is a Sender?