

DAV PUBLIC SCHOOL SECL KORBA
Summer Holiday Home Work 2025-26
Class: IX

Subject	Topic																														
English	<div>1. Make a tense chart in A4 size paper.</div> <div>2. Duke meets the narrator SudhaMurty. Develop a conversation between them bringing out how they prove to be helpful for others.</div> <div>3. Education opens new venues for all. Highlighting the importance of education write a letter to your younger brother advising him not to miss his school.</div> <div>4. Pen down the character sketches of Duke, Chuck, Grandmother and SudhaMurty along with suitable pictures.</div> <div>Note: Question No. 2,3 and 4 to be done in Enrichment Copy.</div> <div>5. Read the book Gulliver’s Travels and write the meaning of at least 50 words in your subject enrichment note book.</div>																														
Maths	<div><u>Assertion-and-Reason Type Questions</u></div> <div>Each question consists of two statements, namely, Assertion (A) and eason (R). For selecting the correct answer, use the following code:</div> <div>(a) Both Assertion (A) and Reason (R) are true and Reason (R) is a correct explanation of Assertion</div> <div>(b) Both Assertion (A) and Reason (R) are true but Reason (R) is not a correct explanation of Assertion</div> <div>(c) Assertion (A) is true and Reason (R) is false.</div> <div>(d) Assertion (A) is false and Reason (R) is true.</div> <table><tr><th>Qu</th><th>Assertion</th><th>Reason</th></tr><tr><td>1.</td><td>Rational number lying between 1/4 and 1/2 is 3/8.</td><td>Rational number lying between two rational numbers x and y is (x+y)/2</td></tr><tr><td>2.</td><td>0.329 is a terminating decimal.</td><td>A decimal in which a digit or a set of digits is repeated periodically, is called a repeating, or a recurring decimal.</td></tr><tr><td>3.</td><td>Rational number lying between two rational numbers x and y is (x+y)/2.</td><td>There is one rational number lying between any two rational numbers.</td></tr><tr><td>4.</td><td>5 is a rational number</td><td>The square roots of all positive integers are irrationals.</td></tr><tr><td>5.</td><td>Sum of two irrational numbers 2 + √3 and 4 + √3 is irrational number.</td><td>Sum of two irrational numbers is always an irrational number.</td></tr><tr><td>6.</td><td>7⁸ ÷ 7⁴ = 7⁴</td><td>If a > 0 be a real number and p and q be rational numbers. Then a^p x a^q = a^{p+q}</td></tr><tr><td>7.</td><td>√5 is an irrational number.</td><td>A number is called irrational, if it cannot be written in the form p/q, where p and q are integers and q≠0</td></tr><tr><td>8.</td><td>the rationalizing factor of 3+2√5 is 3-2√5.</td><td>If the product of two irrational numbers is rational then each one is called the rationalizing factor of the other</td></tr><tr><td>9.</td><td>11³ x 11⁴ = 11¹²</td><td>If a > 0 be a real number and p and q be rational numbers. Then a^p x a^q = a^{p+q}</td></tr></table> <div><u>Multiple Choice Questions</u></div> <div>10.Can we write 0 in the form of p/q?</div> <div>a. Yesb. Noc. Cannot be explainedd. None of the above</div> <div>11.The three rational numbers between 3 and 4 are:</div> <div>a. 5/2, 6/2, 7/2 b. 13/4, 14/4, 15/4</div> <div>c. 12/7, 13/7, 14/7 d.11/4, 12/4, 13/4</div>	Qu	Assertion	Reason	1.	Rational number lying between 1/4 and 1/2 is 3/8.	Rational number lying between two rational numbers x and y is (x+y)/2	2.	0.329 is a terminating decimal.	A decimal in which a digit or a set of digits is repeated periodically, is called a repeating, or a recurring decimal.	3.	Rational number lying between two rational numbers x and y is (x+y)/2.	There is one rational number lying between any two rational numbers.	4.	5 is a rational number	The square roots of all positive integers are irrationals.	5.	Sum of two irrational numbers 2 + √3 and 4 + √3 is irrational number.	Sum of two irrational numbers is always an irrational number.	6.	7 ⁸ ÷ 7 ⁴ = 7 ⁴	If a > 0 be a real number and p and q be rational numbers. Then a ^p x a ^q = a ^{p+q}	7.	√5 is an irrational number.	A number is called irrational, if it cannot be written in the form p/q, where p and q are integers and q≠0	8.	the rationalizing factor of 3+2√5 is 3-2√5.	If the product of two irrational numbers is rational then each one is called the rationalizing factor of the other	9.	11 ³ x 11 ⁴ = 11 ¹²	If a > 0 be a real number and p and q be rational numbers. Then a ^p x a ^q = a ^{p+q}
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12. In between any two numbers, there are:
 a. Only one rational number b. Two rational numbers
 c. Infinite rational numbers d. No rational number
13. Every rational number is:
 a. Whole number b. Natural number
 c. Integer d. Real number
14. $\sqrt{9}$ is _____ number.
 a. A rational b. An irrational
 c. Neither rational nor irrational. d. None of the above

Subjective Questions

Number system

15. Represent $\sqrt{8}$ on the number line.
16. Express: (i) $0.\overline{252}$ (ii) $0.2\overline{52}$ in the form of p/q , where p and q are integers.
17. If $x = 3 + 2\sqrt{2}$, check whether $x + 1/x$ is rational or irrational.
18. If $\frac{5+\sqrt{3}}{5-\sqrt{3}} = a + b\sqrt{3}$, find the value a and b .
19. Rationalize : $\frac{1}{7+2\sqrt{3}}$

Polynomials

20. The polynomials $P(t) = 4t^3 - st^2 + 7$ and $Q(t) = t^2 + st + 8$ leave the same remainder when divided by $(t - 1)$. Find the value of s .
21. Find the value of k for which the cubic polynomial $3y^3 - \frac{3}{2}y^2 + ky + 5$ is exactly divisible by $\left(y - \frac{1}{2}\right)$.
22. If $x = -2$ is a root of the polynomial $P(x) = -2x^4 - 7x^3 - 3x^2 - tx - 10$, then find the value of t .
23. Evaluate the following products using algebraic identities.
 (a) 993^3 b) 1002^3
24. If $t + \frac{1}{t} = 8$, then find the value of $t^3 + \frac{1}{t^3}$.
25. Factorise:
 A) $2y^3 - 4y^2 - 2y + 4$
 B) $2x^2 + 7x + 3$
 C) $x^3 + 13x^2 + 32x + 20$
26. If $x^3 + 1/x^3 = 2$ find $(x + 1/x)$
27. Factorize: (i) $x^4 + x^2 + 1$ (ii) $X^4 + 4$
28. factorize: $6 - x - 2x^2$
29. Find the remainder when $x^3 - ax^2 + 6x - a$ is divided by $x - a$.
30. Find the value of $x^3 + y^3 + 15xy - 125$ if $x + y = 5$

Activity

Represent $\sqrt{10}$ on the number line by square root spiral method.
 (In the chart paper using different colours)

Project

Write about life of an Indian Mathematician

SUBJECT – PHYSICS

- I. Complete your notebook and learn the taught portion.
- II. Complete the assigned experiment in your lab manual copy.
- III. Solve the given questions in your Physics copy:
- What would be the displacement of a particle moving in a circular path of radius r after a completing two rounds?
a) $2\pi r$ b) πr c) $2r$ d) Zero
 - The path length travelled by a body in a given time interval is known as _____.
a) Distance b) displacement c) velocity d) acceleration
 - Velocity is defined as _____ per time.
a) Distance b) displacement c) power d) acceleration
 - A body travels along a straight path from its initial position to a point 20 m away and then returns back to its initial position. The displacement of the body is _____.
a) 0 m b) 20 m c) 40 m d) 60 m
 - Which of the following is NOT a vector quantity?
a) Displacement b) speed c) velocity d) acceleration
 - What would be the displacement of a particle moving in a circular path of radius r after half a circle?
a) $2\pi r$ b) πr c) $2r$ d) Zero
 - A car travels 100km east and then 100km south .Finally, it come back to the starting point by south- east route .Throughout the journey the speed is constant at 60km/h.The average velocity of the car for the whole journey if the time taken is 3.3h is
a) 60km/h b) 90km/h c) 0km/h d) 180km/h
 - A body travels a distance of 20m in 5 s and 30m in another 5s. The average speed of the body is
a) 0m/s b) 5m/s c) 10m/s d) 20m/s
 - What would be the distance travelledby a particle moving in a circular path of radius r after half a circle?
a) $2\pi r$ b) πr c) $2r$ d) Zero
 - The velocity of a car changes from 15m/s to 10m/s in 2 s.The acceleration of the car is
a) -2.5m/s^2 b) 2.5m/s^2 c) -5m/s^2 d) 5m/s^2

Science

ASSERTION REASON QUESTIONS

Directions: In each of the following questions, a statement of Assertion is given and a corresponding statement of Reason is given just below it. Of the statements, given below, mark the correct answer as:

- (a) Both assertion and reason are true and reason is the correct explanation of assertion.
(b) Both assertion and reason are true but reason is not the correct explanation of assertion.
(c) Assertion is true but reason is false.
(d) Assertion is false but Reasontrue.

- Assertion :** An object may acquire acceleration even if it is moving at a constant speed.
Reason : With change in the direction of motion, an object can acquire acceleration.
- Assertion :** Displacement of an object may be zero even if the distance covered by it is not zero.
Reason : Displacement is the shortest distance between the initial and final position.
- Assertion :** A body may have acceleration even when its velocity is zero.
Reason :Acceleration is rate of change of velocity.
- Assertion :** The numerical ratio of displacement to distance is equal to or less than one.
Reason :Displacement is a vector quantity and distance is a scalar quantity.
- Assertion :** The numerical ratio of displacement to distance is equal to or greater than one.

Reason :Displacement is a scalar quantity and distance is a vector quantity.

SUBJECT – Chemistry

ANSER THE FOLLOWING QUESTION

1. Water as ice has a cooling effect, whereas water as steam may cause severe burns. Explain these observations.
2. You are provided with a mixture of naphthalene and ammonium chloride by your teacher. Suggest an activity to separate them with a well labelled diagram.
3. You want to wear your favourite shirt to a party but the problem is that it is still wet after a wash. What steps would you take to dry it faster?
4. Comment on the following statements :
 - a. Evaporation produces cooling
 - b. The rate of evaporation of an aqueous solution decreases with an increase in humidity.
 - c. Sponge though compressible is solid.
5. Which of the following diffuses faster?
Water vapour, wax or, ethyl alcohol.
6. Why do we see water droplets on the outer surface of a glass containing ice cold water?

CASE BASED QUESTION

Temperature can be expressed in three important scales. These are Celsius scale ($^{\circ}\text{C}$), Fahrenheit scale ($^{\circ}\text{F}$) and Kelvin scale (K). Kelvin scale is often used to express temperature in scientific data. Temperature in any one scale can be easily converted into another scale by using the following equations. If x is the temperature on Celsius scale, then $x^{\circ}\text{C} = (x+273)^{\circ}\text{K}$ and $x^{\circ}\text{C} = [(9/5)x + 32]^{\circ}\text{F}$

Answer the following questions using above information

What is the boiling point of water in Kelvin scale?

ii) If $x^{\circ}\text{C} = x^{\circ}\text{F}$, what is the value of x ?

iii) Freezing point of water is a) 0°K b) 0°F c) 273°K d) 273°F

iv) If temperature of certain oil is 65°C , what is the corresponding temperature on Kelvin scale?

a) 330°K b) 155°K c) 298°K d) 338°K

PROJECT WORK

1. Investigate how temperature and pressure affects the states of matter (melting, freezing, boiling etc)
2. Create a chart with a different sections for solid, liquid and gaseous listing examples and characteristics.

ASSERTION AND REASON:

Directions for the question In each of the questions given below, there are two statements marked as Assertion (A) and Reason (R). Mark your answer as per the codes provided below:

1. Both A and R are true and R is the correct explanation of A.
2. Both A and R are true but R is not the correct explanation of A.
3. A is true but R is false.
4. A is false but R is true.

1. Assertion – When a solid melts, its temperature remains the same.

Reason – The heat gets used up in changing the state by overcoming the forces of attraction between the particles.

2. Assertion - It is easier to cook food at sea level as compared to higher altitude.

Reason – The boiling point of water increases at high altitude.

SUBJECT – Biology

I. Prepare any one project from the following .

- a) A Powerpoint presentation on cell - its structure and function
- b) A 3D model of plant cell / animal cell using ecofriendly materials.
- c) Find out about electron microscope through internet and prepare a portfolio on it.

II. Answer the following questions

- 1) Explain the types of Plastids in brief.

	<p>2) Explain the functions and structure of Golgi bodies.</p> <p>3) What is nucleoid?</p> <p>4) What is the difference between plant cells and animal cells?</p> <p>5) What are suicidal bags (lysosomes)?</p> <p>6) What is the function of chromosomes?</p> <p>7) Name the smallest cell in human body?</p> <p>8) Which is the largest cell in human body?</p> <p>9) Why Plant cells are more rigid than animal cells?</p> <p>10) Explain the process of osmosis in detail.</p> <p>11) Draw and label diagrams of plant cell and animal cell.</p> <p>12) What is cell theory? Who formulated it?</p> <p>13) Write the full form of DNA and ATP.</p> <p>14) What is the importance of nucleus?</p> <p>15) What is membrane biogenesis?</p> <p>16)a.What is a hypotonic solution ? b.What do you observe when a de-shelled egg is kept in pure water for 5 minutes. Why?</p> <p>17) What is cell theory? Name the scientist who proposed it.</p> <p>18) Name the scientist who discovered a. cell b.nucleus c.mitochondria d.ribosome e. Golgi body</p> <p>19).Name the cell organelles that possess a. .double membrane b.single membrane c.without membrane d.largest Cell organelle e .smallest cell organelle.</p>
SSt	<p>A. Prepare a project on disaster management. Project should be on A 4 size paper and hand written. You can choose any one of the topic given below:-</p> <ol style="list-style-type: none"> 1. Earthquakes 2. Flood 3. Landslide 4. Cyclone <p>B. Show the significance of Longitude and Latitude on India by making Model.</p> <p>C. On an outline map of France Mark These places</p> <ol style="list-style-type: none"> 1. Nantes 2. Bordeaux 3. Paris 4. Marseilles <p>Learn all the question answers of completed chapters</p>
Hindi	<p>१. मुंशी प्रेमचंद जी का जीवन परिचय कॉपी पर ५० शब्दों में लिखिए।</p> <p>२. पाठ १,२ और ३ के सभी प्रश्नोत्तर कॉपी पर लिखकर याद करें।</p> <p>३. आपने गर्मी की छुट्टी के समय किसी स्थान की यात्रा अवश्य की होगी? यात्रा के दौरान हुए अनुभवों पर परियोजना कार्य बनाइए। (ए-४ साइज़ पेपर में)</p> <p>४. आप प्रतिदिन टी.वी. पर ढेरों विज्ञापन सुनते-देखते हैं और इनमें से कुछ आप की जुबान पर चढ़ जाते हैं। आप अपनी पसंद की किन्हीं पाँच वस्तुओं पर विज्ञापन तैयार कर परियोजना कार्य बनाइए। (ए-४ साइज़ पेपर में)</p> <p>५. मुंशी प्रेमचंद जी द्वारा लिखित उपन्यास 'गबन' पढ़िए और 50 कठिन शब्द हिन्दी कॉपी में लिखकर याद करिए।</p>
Sanskrit	<p>1-‘अविवेकः परमापदां पदम्।’ (अज्ञानता बड़ी आपत्ति का स्थान होता है) इसी सिद्धान्त पर आधारित कोई एक कथा संस्कृत में चित्र सहित लिखिये तथा कथा में आये क्रियापदों की सूची बनाइये।</p> <p>2-राजन्, भवत्(पुल्लिङ्ग व स्त्रीलिङ्ग), आत्मन्, विद्वस्, गच्छत्(पुल्लिङ्ग व स्त्रीलिङ्ग) शब्दों के शब्दरूप व्याकरण पुस्तक की सहायता से (संस्कृत कॉपी में) लिखिये।</p>
AI	<p>Make poster on any one:</p> <ol style="list-style-type: none"> 1) Cyber Security 2) AI tools (with details) helpful in school/office.