DAV PUBLIC SCHOOL SECL KORBA

Summer Holiday Home Work 2025-26

Class: X

Subject	Topic
English	1. On the basis of your reading of the poem The Frog and the Nightingale, pick all the literary devices used in the poem and write it down in your Enrichment copy.Also pick any other poem by Vikram Seth and write it down. 2. Prepare a project file on the topic Role of wildlife Sanctuaries in saving tiger population in India along with pictures.(write about any three wild life Sanctuaries where Tiger conservation has been taken up) 3. a. Miss Mebbin meets the frog in the Bingle Bog. Both start to discuss how they were able defeat their opponents (Mrs.Packletide and the nightingale) Develop a conversation between both of them. b. Extreme challenges in life make a man of you- throw light on this statement with reference to the lesson Two Gentlemen of Verona. (Do the questions 3a and b in literature note copy). 4. Read the book" The Story of my Life" by Hellen Keller and pick up 50 new words and write their meanings in your enrichment note book. Write down the bio – sketch of Hellen Keller in a project file.
Maths	Assertion and Reason Based Questions: DIRECTION: In the following questions, a statement of assertion (A) is followed by a statement of Reason (R) . Mark the correct choice as: (a) Both assertion (A) and reason (R) are true and reason (R) is the correct explanation of assertion (A) (b) Both assertion (A) and reason (R) are true and reason (R) is not the correct explanation of assertion (A) (c) Assertion(A) is true but reason(R) is false. (d) Assertion(A) is false but reason(R) is true. 1.**Assertion**: The HCF of two numbers is 18 and their product is 3072. Then their LCM is 169. **Reason**: If a, b are two positive integers, then HCF x LCM=a x b. 2.**Assertion**: $\mathbf{12}\boldsymbol{n}$ ends with the digit zero, where n is any natural number. **Reason**: Any number ends with digit zero, if its prime factor is of the form $2m$ x $5n$, where m and n are natural numbers. 3. **Assertion**: x2+7x+12 has no real zeroes. **Reason**: A quadratic polynomial can have at the most two zeroes. 4. **Assertion**: If the product of the zeroes of the quadratic polynomial x2+3x+5k is -10 then value of k is -2. **Reason**: Sum of zeroes of a quadratic polynomial ax2+bx+c is -b/a 5.**Assertion**: If the product of the zeroes of the quadratic polynomial x2+3x+5k is -10 then value of k is -2. **Reason**: Sum of zeroes of a quadratic polynomial ax2+bx+c is -b/a 6.**Assertion**: The value of k for which the system of linear equations 3x-4y=7 and 6x-8y=k have infinite number of solution is 14. **Reason**: The graph of linear equations a1x+b1y+c1=0 and a2x+b2y+c2=0 gives a pair of intersecting lines if a1/a2 ≠ b1/b2. 7. Solve the following questions attached below :-

4. If α and β are the zeros of the quadratic polynomial $p(y) = 5y^2 - 7y + 1$, find the value of $\frac{1}{\alpha} + \frac{1}{\beta}$.

5. If one zero of the quadratic polynomial $f(x) = 4x^2 - 8kx - 9$ is negative of the other, find the value of k.

6. If the sum of the zeros of the quadratic polynomial $f(t) = kt^2 + 2t + 3k$ is equal to their product, find the value of k.

BASED ON LOTS

7. Find the zeros of each of the following quadratic polynomials and verify the relationship between the zeros and their coefficients:

(i) $p(x) = x^2 + 2\sqrt{2}x - 6$

(ii) $q(x) = \sqrt{3}x^2 + 10x + 7\sqrt{3}$

(iii) $f(x) = x^2 - (\sqrt{3} + 1)x + \sqrt{3}$

(iv) $g(x) = a(x^2 + 1) - x(a^2 + 1)$

(v) $h(s) = 2s^2 - (1 + 2\sqrt{2})s + \sqrt{2}$ [NCERT EXEMPLAR]

(vi) $f(v) = v^2 + 4\sqrt{3}v - 15$ [NCERT EXEMPLAR]

(vii) $p(y) = y^2 + \frac{3\sqrt{5}}{2}y - 5$ [NCERT EXEMPLAR]

(viii) $\phi(x) = 4x^2 + 5\sqrt{2}x - 3$ [NCERT EXEMPLAR]

8. Find a quadratic polynomial whose sum and product respectively of the zeros are given. Also, find the zeros of these polynomials.

(i) $-2\sqrt{3}, -9$

(ii) $-\frac{3}{2\sqrt{5}}, -\frac{1}{2}$ [NCERT EXEMPLAR]

9. If α and β are the zeros of the quadratic polynomial $p(x) = 4x^2 - 5x - 1$, find the value of $\alpha^2\beta + \alpha\beta^2$.

10. If α and β are the zeros of the quadratic polynomial $f(x) = 6x^2 + x - 2$, find the value of $\frac{\alpha}{\beta} + \frac{\beta}{\alpha}$.

11. If α and β are the zeros of the quadratic polynomial $f(x) = x^2 - p(x + 1) - c$, show that $(\alpha + 1)(\beta + 1) = 1 - c$.

12. If α and β are the zeros of a quadratic polynomial such that $\alpha + \beta = 24$ and $\alpha - \beta = 8$, find a quadratic polynomial having α and β as its zeros.

13. Find a quadratic polynomial whose zeros are negative of the zeros of the polynomial $px^2 + qx + r$.

BASED ON HOTS

BASIC

1. Find the zeros of each of the following quadratic polynomials and verify the relationsh between the zeros and their coefficients:

   (i) $f(x) = x^2 - 2x - 8$ [NCERT]

   (ii) $g(s) = 4s^2 - 4s + 1$ [NCER

   (iii) $h(t) = t^2 - 15$ [NCERT]

   (iv) $f(x) = 6x^2 - 3 - 7x$ [NCER

   (v) $q(y) = 7y^2 - \frac{11}{3}y - \frac{2}{3}$ [NCERT EXEMPLAR, CBSE 201

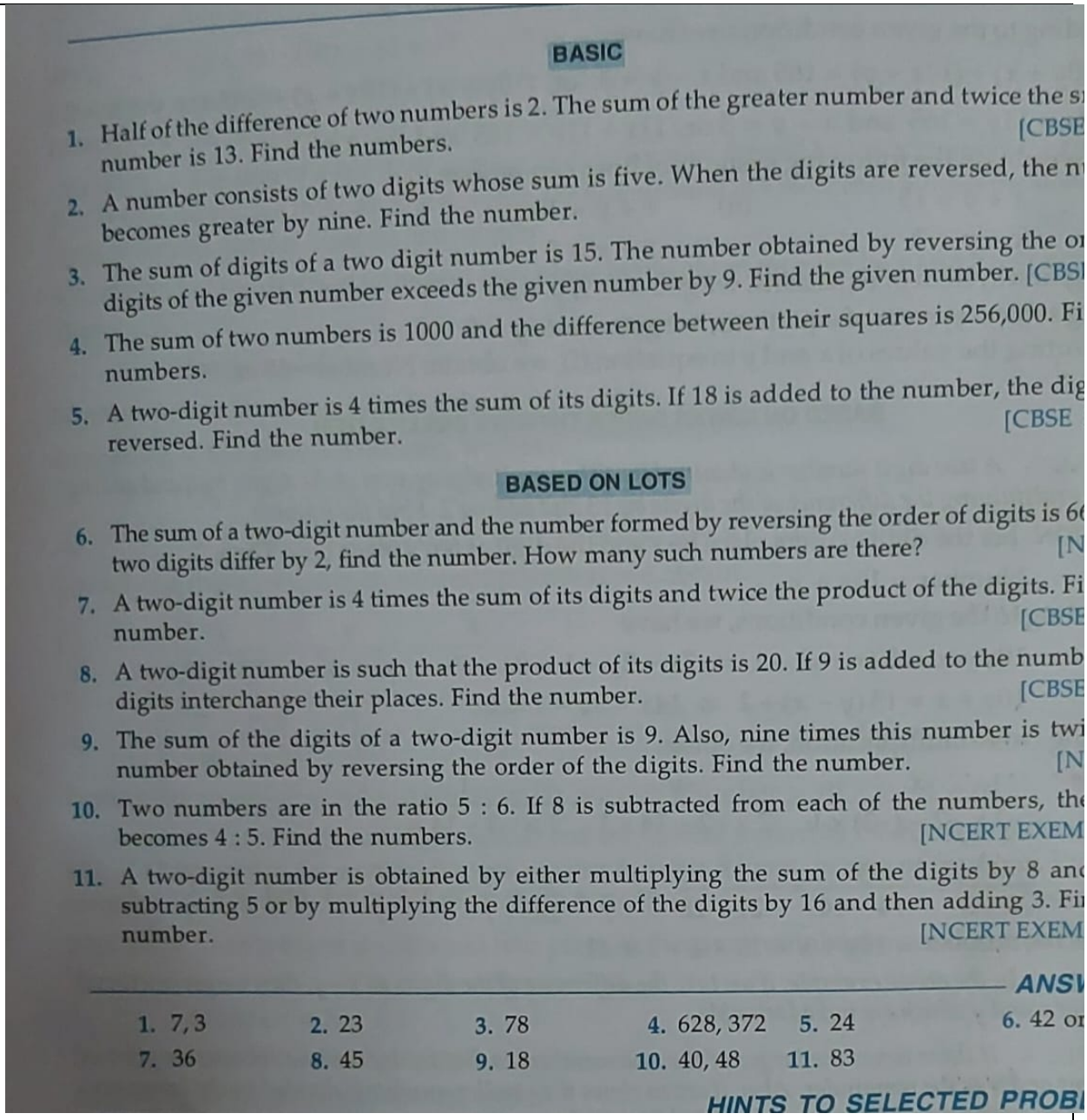
   (vi) $\phi(x) = 2x^2 + \frac{7}{2}x + \frac{3}{4}$. [NCERT EXEMPLA

2. For each of the following, find a quadratic polynomial whose sum and product respectively the zeroes are as given. Also, find the zeroes of these polynomials by factorization.

   (i) $-\frac{8}{3}, \frac{4}{3}$

   (ii) $\frac{21}{8}, \frac{5}{16}$

3. If α and β are the zeros of the quadratic polynomial $f(x) = x^2 - 5x + 4$, find the value $\frac{1}{\alpha} + \frac{1}{\beta} - 2\alpha\beta$.



BASIC

1. Half of the difference of two numbers is 2. The sum of the greater number and twice the s number is 13. Find the numbers. [CBSE
2. A number consists of two digits whose sum is five. When the digits are reversed, the n becomes greater by nine. Find the number.
3. The sum of digits of a two digit number is 15. The number obtained by reversing the or digits of the given number exceeds the given number by 9. Find the given number. [CBS
4. The sum of two numbers is 1000 and the difference between their squares is 256,000. Fi numbers.
5. A two-digit number is 4 times the sum of its digits. If 18 is added to the number, the dig reversed. Find the number. [CBSE

BASED ON LOTS

6. The sum of a two-digit number and the number formed by reversing the order of digits is 6 two digits differ by 2, find the number. How many such numbers are there? [N
7. A two-digit number is 4 times the sum of its digits and twice the product of the digits. Fi number. [CBSE
8. A two-digit number is such that the product of its digits is 20. If 9 is added to the numb digits interchange their places. Find the number. [CBSE
9. The sum of the digits of a two-digit number is 9. Also, nine times this number is twi number obtained by reversing the order of the digits. Find the number. [N
10. Two numbers are in the ratio 5 : 6. If 8 is subtracted from each of the numbers, the becomes 4 : 5. Find the numbers. [NCERT EXEM
11. A two-digit number is obtained by either multiplying the sum of the digits by 8 and subtracting 5 or by multiplying the difference of the digits by 16 and then adding 3. Fi number. [NCERT EXEM

ANSW

1. 7, 3 2. 23 3. 78 4. 628, 372 5. 24 6. 42 or
7. 36 8. 45 9. 18 10. 40, 48 11. 83

HINTS TO SELECTED PROBL

Science	SUBJECT- **PHYSICS** I. Complete your notebook and learn the taught portion. II. Complete the assigned experiment in your lab manual copy. III. Make an attractive formula sheet of all the formula used in chapter 9 Light- Reflection and refraction . IV. Solve the given questions in your notebook. 1. The focal length of a plane mirror is (a) 0 (b) infinite (c) 25 cm (d) -25 cm 2. An object is placed at a distance of 40cm in front of a concave mirror of a focal length of 20 cm.The image produced is: (a) virtual and inverted (b) real and erect (c) real, inverted and of size larger than that of the object (d) real, inverted and of the same size as that of the object 3. Image formed by a convex spherical mirror is:

(a) virtual (b) real (c) enlarged (d) inverted

4. A concave mirror forms a 5mm long image of an object at a distance 30cm in front of the mirror. If the object is 10mm long, what is the focal length of the mirror?

(a) -20cm (b) -30cm (c) -40 cm (d) -60 cm

5. Magnification produced by a rear view mirror is

(a) Less than one (b) More than one (c) Equal to one (d) More than or equal to one

6. A concave mirror gives real, inverted and same size image if the object is placed

(a) At F (b) At infinity (c) At C (d) Beyond C

7. Which of the following mirror is used by a dentist to examine a small cavity?

(a) Convex mirror (b) Plane mirror (c) Concave mirror

(d) Combination of convex and concave mirror

8. An object at a distance of 30 cm from aconcave mirror gets its image at the same point. The focal length of the mirror is

(a) – 30 cm(b) 30 cm(c) – 15 cm(d) +15 cm

9. A concave mirror of focal length 20 cm forms an image having twice the size of object. If the image formed is virtual, the position of object will be at

(a) 25 cm(b) 40 cm(c) 10 cm(d) At infinity

10 If a man's face is 25 cm in front of concave shaving mirror producing erect image 1.5 times the size of face, focal length of the mirror would be

(a) -75 cm(b) -25 cm(c) 15 cm(d) 60 cm

ASSERTION AND REASON QUESTIONS

1. **Assertion (A) :** A ray passing through the center of curvature of a concave mirror after reflection, is reflected back along the same path.
   Reason (R) : The incident rays fall on the mirror along the normal to the reflecting surface.
2. **Assertion(A):** The mirrors used in search lights are concave spherical.
   Reason (R) : In concave spherical mirror the image formed is always virtual.
3. **Assertion(A) :** For observing traffic at back, the driver mirror is convex mirror.
   Reason (R) : A convex mirror has much larger field of view than a plane mirror.
4. **Assertion(A) :** Mirror formula can be applied to a plane mirror.
   Reason (R) : A plane mirror is a spherical mirror of infinite focal length.
5. **Assertion(A) :** It is not possible to see a virtual image by eye.
   Reason (R): The rays that seem to emanate from a virtual image do not in fact emanates from the image.
6. **Assertion(A) :** The height of an object is always considered positive.
   Reason (R) : An object is always placed above the principal axis in this upward direction.
7. **Assertion(A) :** Concave mirrors are used as make-up mirrors.
   Reason (R) : When the face is held within the focus of a concave mirror, then a diminished image of the face is seen in the concave mirror.
8. **Assertion(A) :** The formula connecting u, v and f for a spherical mirror is valid in all situations for all spherical mirrors for all positions of the object.
   Reason (R) : Laws of reflection are strictly valid for plane surfaces.
9. **Assertion(A):** Virtual images are always erect.
   Reason (R) : Virtual images are formed by diverging mirror only.
10. **Assertion(A) :** Concave mirrors are used in solar furnaces.
    Reason (R) : Concave mirrors are converging mirrors.

Chemistry

1. Write balanced chemical equations for the following chemical reactions.

   i) Aluminium + Bromine --------→Aluminium bromide.
   ii) Calcium carbonate -----→Calcium oxide + Carbondioxide.
   iii) Silver chloride -----→Silver + Chlorine.
   iv) Potassium bromide + Barium iodide-----→Potassium iodide + Barium bromide.
   v) Hydrogen + Chlorine ------→Hydrogen chloride.
   vi) Copper + Silver nitrate--------→Copper nitrate + Silver.
   vii) Sodium hydroxide + Sulphuric acid-----→Sodium sulphate + Water.
   viii) Magnesium + Hydrochloric acid------→Magnesium chloride + Hydrogen.
   ix) Zinc carbonate------→ Zinc oxide + Carbondioxide.
   x) Magnesium + nitrogen-----→Magnesium nitride.

2. Make a list of names of elements (any 20) and radicals (any 10) with their valencies in tabular form.(Refer to class IX)

3. Write formulae of the following compounds.

   i) Silver(I)bromide, ii) Aluminium oxide, iii) Calcium chloride, iv) Zinc sulphate, v) Aluminiumsulphate, vi) Iron(II)sulphate, vii) Sodium nitrite, viii) Copper(II)chloride,

   ix) Aluminium nitride, x) Potassium nitrate, xi) Iron(II)sulphide, xii) Sodium sulphite, xiii) Calcium phosphate, xiv) Sodium acetate, xv) Magnesium carbonate.

4. Write an activity to describe each of the following

   i) Combination reaction.

   ii) Decomposition reaction.

   iii) Single displacement reaction.

5. Explain why respiration is an exothermic reaction.

6. What happens when

   i) Ferrous sulphate crystals are heated?

   ii) Electricity is passed through water?

   iii) Lead nitrate crystals are heated?

   iv) An iron nail is dipped in copper sulphate solution?

Subject **Biology**

I .Prepare any one of the following projects.

a. A model of human respiratory system

b. APortfolio on diseases of human digestive system under the following points :DIsease its causes, symptoms ,prevention

c A portfolio on diseases of human respiratory system under the following points causes symptoms and prevention .

d. A poster /collage on food of Chhattisgarh and nutrition

II. Answer the following questions

Q1. Differentiate between autotrophic and heterotrophic nutrition

Q2 list the events happening during the process of photosynthesis.

Q3. What are stomata? Write the functions of stomata.Draw a labelled diagram to show stomata

Q4. Stomata of desert plants remains closed during the day .Explain how and when do they take up carbon dioxide to perform photosynthesis.

Q5 Draw a diagram depicting human alimentary canal and label the following

i).part where digestion starts. ii).leaf like gland

iii).part which stores bile juiceiv) largest gland

b. State the role of liver and pancreas.

Q6 what function is served by the following

a).Gasric sphincterb).Anal sphincter

Q7 Describe the nutrition in amoeba. Illustrate it with diagram..

Q8Is there any difference in the way of intake of food in Amoeba and paramecium?if yes Explain.

	Q9 Describe the process of digestion in human intestine. Q10. Define: a) Peristalsis b).Emulsificationc).Saprophyte d).Parasitic nutritione) Respiration. Q11 Not all plants carry out photosynthesis by the same mechanism. In most plants, photosynthesis depends directly on the gaseous carbon dioxide that diffuses into the leaf through the stomata. However, some plants - such as pineapple - have the ability to store carbon dioxide in the vacuoles of the leaf cells as part of a complex carbon compound. This complex compound is transported to the chloroplasts and releases carbon dioxide when required, for photosynthesis to occur. This special photosynthesis mechanism is believed to have evolved as an adaptation to conserve water for survival in dry conditions. (a) Which process in the plants does this photosynthesis mechanism minimise to help the plant survive in dry conditions? (b) How is the ability to store carbon dioxide as a complex compound likely to help minimise the process referred to in (a)? (c) When are such plants likely to take in carbon dioxide from the environment?
SSt	**Economics** 1. Prepare a project on the topic" Sustainable Development." 2. What can be some of the development all goals for your village, town or locality? 3. How would income and employment increase if farmers were provided with irrigation and marketing facilities? 4. In what ways can employment be increased in urban areas? **History** 1. Who was Fredric Sorrieu ? 2. What was the main objective of the treaty of Vienna? 3. What was features of civil code of 1804? 4. Explain the concept of liberalism in political and economic sphere. 5. How did sense of collectiveness spread among French people? 6. How did Germany Italy united as an Independent Nation? 7. How formation of nation state was the result of a long drawn out process in Britain? 8. Revise and prepare all the question-answer of completed chapters. **Political Science** 1. Differentiate between Horizontal power sharing and Vertical power sharing. 2. Explain the ethnic composition of Belgium and Shri Lanka. 3. Why is power sharing desirable? Explain. 4. What are the main features of Federalism? Revise and prepare all the question-answer of completed chapters.
Hindi	१. स्वयं प्रकाश जी का ८० शब्दों में जीवन परिचय लिखिए। २. पाठ १,२,३, और ४ के सभी प्रश्नोत्तर कॉपी में लिखकर याद करें। ३. नेताजी सुभाष चंद्र बोस के व्यक्तित्व और कृतित्व पर एक परियोजना कार्य बनाइए।(ए-४ साइज़ पेपर में) ४. आपके विद्यालय में शारीरिक रूप से चुनौती पूर्ण विद्यार्थी हैं। उनके जीवन के उतार-चढ़ाव पर आधारित एक परियोजना कार्य बनाइए।(ए-४ साइज़ पेपर में) ५. ग्राम्य संस्कृति, शहरी संस्कृति से किस प्रकार अलग है? 'बालगोविन भगत' पाठ के आधार पर एक परियोजना कार्य बनाइए।(ए-४ साइज़ पेपर में) ६. मन्नू भंडारी जी द्वारा लिखित उपन्यास 'महाभोज' पढ़िए और 50 कठिन शब्द हिन्दी कॉपी में लिखकर याद करिए।

Skt.	'आज्ञा गुरूणां हि अविचारणीया' नामक पाठ से क्रियाविशेषण एवं सर्वनाम शब्द छाँटकर लिखिये एवम् अपने मन पसन्द चित्र बनाकर संस्कृत में दस वाक्य लिखें।
AI	Make posters on any one: 1) Cyber Security 2) AI tools (with details) helpful for work in school/office.