



DAV PUBLIC SR. SEC. SCHOOL, BINA PROJECT, NCL
SONBHADRA



Class - 10th

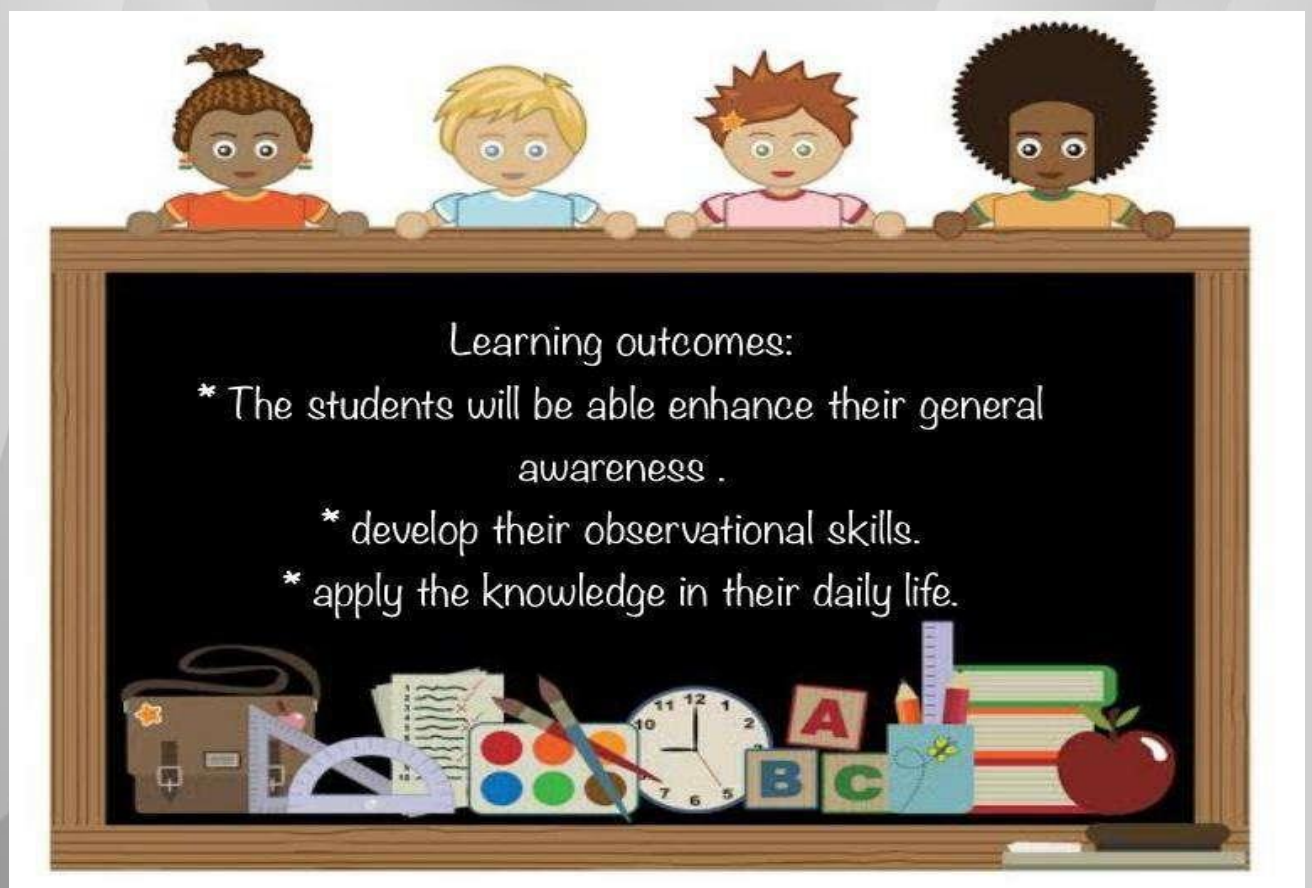
Session 2024 - 25

Homework Holiday



Dear Parents,

Vacation is a time to reinvigorate and revive, however the duties of a student must not be forgotten either. A balance, therefore, recreation and work must be found to ensure a break that is productive as well as relaxing. The holiday homework has been shared to keep the children indulged in the learning process. Do ensure the child is involved with your guidance



English

Instructions:

- Groups are made to complete the project works
- Give your best n presentable projects.
- Projects are based on experiential learning.

As per discussion in class, the following homework is assigned for students-

- * To prepare a 3D comic booklet of stories.
- * Digital album- Create a digital movie based on text.
- * prepare a model of a few lessons
- * make an animated film of the lessons
- * create e-magazine for the school
- * Design activities & games based on chapters

Hindi

* परियोजना कार्य -

चार्ट पर रंगीन और सचित्र सुलेखन -

* तुलसीदास का संक्षिप्त जीवन परिचय

एवं ' राम - लक्ष्मण - परशुराम संवाद'

* अनुच्छेद लेखन-

* जल ही जीवन है।

* जलवायु परिवर्तन के खतरे

* समय का महत्त्व

Sanskrit

प्रदत्तकार्यम्-1

आदिकवि: वाल्मीकि:

कृष्णद्वैपायन वेदव्यास:

महाकवि बाणभट्ट:

भर्तृहरि: परिचय:

महाकवि कालिदास:

प्रदत्तकार्यम्-2

वेदानां परिचय:

सत्यार्थप्रकाशस्य परिचय:

वैदिकसाहित्यस्य परिचय:

रामायणस्य विस्तृतं वर्णनम्

श्रीमद्भगवद् गीता

नोट- प्रदत्तकार्यम्-1 इति कार्ये कवीनां विस्तृतः परिचयः लेखनीयः। यथा- जन्म, कालः, रचनाः, निवासादीनां विस्तृतरूपेण लेखनीयः।

प्रदत्तकार्य-2 मध्ये प्रदत्त विषयोपरि विस्तृत प्रतिवेदनं निर्माय प्रस्तोतव्यम्।

अन्तिम दिनांकः जून मासस्य नवविंशतितमे दिने अतः तस्मात् पूर्वमेव दातव्यम्।

Mathematics

Find the roots of the following quadratic equations by the factorisation method (1-16) :

1. $2x^2 - 5x + 3 = 0$ [NCERT]
2. $6x^2 - x - 2 = 0$ [NCERT]
3. $3x^2 - 2\sqrt{6}x + 2 = 0$ [NCERT]
4. $(2x - 3)^2 = 49$
5. $3x^2 - 243 = 0$
6. $x^2 - x - 110 = 0$
7. $x^2 + 7x + 10 = 0$ [CBSE SP 21*]
8. $9x^2 - 27x + 14 = 0$
9. $3x^2 + 2\sqrt{5}x - 5 = 0$
10. $5x^2 - 2\sqrt{15}x + 3 = 0$

35. $\frac{4}{x+2} - \frac{1}{x+3} = \frac{4}{2x+1}$; $x \neq -2, -3, -\frac{1}{2}$
36. $\frac{x+3}{x-2} - \frac{1-x}{x} = 4\frac{1}{4}$; $x \neq 2, 0$
37. $\frac{x+1}{x-1} - \frac{x-1}{x+1} = \frac{5}{6}$; $x \neq 1, -1$ [CBSE D 11C]
38. The sum of two numbers is 9 and the sum of their reciprocals is $\frac{1}{2}$. Find the numbers. [CBSE D 12]
39. The product of two successive multiples of 3 is 180. Determine the numbers.
40. Divide 51 into two parts whose product is 378.
41. The sum of the ages of a boy and his sister (in years) is 25 and product of their ages is 150. Find their present ages. [CBSE 22]
42. A man is three times as old as his son and six years ago the product of their ages was 288. Find their present ages.
43. One year ago, the father was 8 times as old as his son. Now his age is the square of his son's age. Find their present ages. [CBSE 1994]
44. A two digit number is such that the product of the digits is 14. When 45 is added to this number, the digits interchange their places. Find the number. [CBSE 20]
45. The sum of the digits of a two-digit number is 9. If 27 is subtracted from the number, the digits are reversed. Find the number. [CBSE D 97C]
46. The speed of a boat in still water is 8 km/h. It can go 30 km upstream and 44 km downstream in 10 hours. Find the speed of the stream.

5. Prove that $\sqrt{5}$ is an irrational number. [CBSE 2009, 10]
6. Prove that $\sqrt{7}$ is an irrational number. [CBSE 2010]
7. Prove that the following are irrational numbers :
 - (i) $3 - \sqrt{5}$ [CBSE 2011]
 - (ii) $2\sqrt{5} - 3$ [CBSE SP 20*]
 - (iii) $7 + 3\sqrt{2}$ [CBSE 09]
 - (iv) $3 + 5\sqrt{2}$ [CBSE 09]
15. It is given that $\text{HCF}(504, 2200) = 8$, then find $\text{LCM}(504, 2200)$. [CBSE 20C]
16. The numbers 525 and 3000 are divisible only by 3, 5, 15, 25 and 75. What is $\text{HCF}(525, 3000)$? Justify your answer. [Exemplar Problem]
17. Can two numbers have 18 as their HCF and 380 as their LCM ? Give reasons. [Exemplar Problem]

Find a quadratic polynomial each with the given numbers as the sum and product of its zeroes respectively :

11. -3, 2 [NCERT]
12. 2, -8 [CBSE SP 21]
13. $3 + \sqrt{5}, 3 - \sqrt{5}$ [CBSE 2010]
14. $2\sqrt{3}, 2$ [CBSE SP 08]
15. $-\frac{1}{2}, -3$ [CBSE SP 08]
16. If α and β are the zeroes of the polynomial $f(x) = x^2 - 4x - 5$, then find the value of $\alpha^2 + \beta^2$. [CBSE 20]
17. If α, β are zeroes of the polynomial $x^2 - 2x - 8$, then form a quadratic polynomial whose zeroes are 2α and 2β . [NCT 2010]
18. If α, β are the zeroes of the polynomial $x^2 - 2x - 8$, then form a quadratic polynomial whose zeroes are 3α and 3β . [CBSE 2010]
19. If α, β are the zeroes of the polynomial $x^2 - x - 2$, then find a quadratic polynomial whose zeroes are $(2\alpha + 1)$ and $(2\beta + 1)$.
20. If α, β are zeroes of the polynomial $x^2 - 3x + 1$, then form a quadratic polynomial whose zeroes are $3\alpha + 5\beta$ and $5\alpha + 3\beta$.
21. If α, β are zeroes of the polynomial $3x^2 + 6x + 2$, then form a quadratic polynomial whose zeroes are $-\frac{\alpha^2}{\beta}$ and $-\frac{\beta^2}{\alpha}$.
22. If α, β are the roots of quadratic polynomial $p(x) = x^2 - (k-6)x + (2k+1)$. Find the value of k , if $\alpha + \beta = \alpha\beta$.

1. Solve the following system of linear equations graphically :

$$2x - 3y - 17 = 0, \quad 4x + y - 13 = 0.$$

Shade the region between the lines and x-axis. [CBSE 03C]

2. Solve graphically :

$$3x - 5y = 19, \quad 3y - 7x + 1 = 0. \quad \text{[CBSE 03]}$$

3. Solve graphically and find the angle between the two lines :

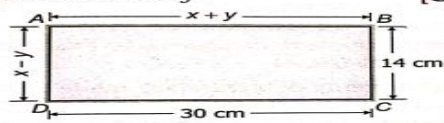
$$4x + 3y = 9, \quad 3x - 4y = 13$$

4. Solve graphically and find the area of the triangle formed by x-axis and these lines :

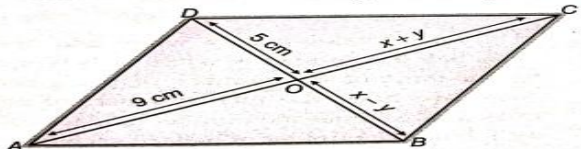
$$x - y + 1 = 0, \quad 3x + 2y - 12 = 0 \quad \text{[CBSE 02]}$$

Solve for x and y (10 – 14) :

10. $y - 4x = 1$; $6x - 5y = 9$ [NCT 17]
 11. $47x + 31y = 63$; $31x + 47y = 15$ [CBSE 10]
 12. $148x + 231y = 527$; $231x + 148y = 610$ [CBSE 10]
 13. $4x + \frac{6}{y} = 15$; $3x - \frac{4}{y} = 7$ [CBSE 10]
 14. $\frac{4}{x} + 5y = 7$; $\frac{3}{x} + 4y = 5$ [CBSE 11]
 15. In the figure, $ABCD$ is a rectangle. Find the values of x and y . [CBSE 18]



16. In the figure below, $ABCD$ is a parallelogram. Find the values of x and y . [CBSE 10]



5. Solve graphically : $2x - 3y = 1$, $3x - 4y = 1$. Does the point $(3, 2)$ lie on any one of the two lines ? Give the equation also.
 6. Show graphically the following system of equations has infinite solution :
 $2y = 4x - 6$, $2x = y + 3$
 7. Check graphically whether the pair of linear equations : $x + 3y = 6$; $2x - 3y = 12$ is consistent. If so, solve them graphically. [NCERT]
 8. Solve graphically and shade the area bounded by these lines and y -axis
 $3x + y - 11 = 0$, $x - y - 1 = 0$. [CBSE 02]

For what values of k or p , will the following pairs of linear equations have unique solutions (17 – 19) ?

17. $x - ky = 2$; $3x + 2y = -5$
 18. $4x + py + 8 = 0$; $2x + 2y + 2 = 0$ [CBSE SP 21]
 19. $2x + ky = 1$; $3x - 5y = 7$. [CBSE 10]

For what values of k , will the following systems of linear equations have infinitely many solutions (20 – 22) ?

20. $10x + 5y - (k - 5) = 0$; $20x + 10y - k = 0$ [CBSE D 08]
 21. $2x + 3y = 4$; $(k + 2)x + 6y = 3k + 2$ [CBSE 10]
 22. $kx + y = k^2$; $x + ky = 1$ [CBSE SP 18]

For what values of k or p , will the following systems of linear equations have no solution (23 – 24) ?

23. $3x + y = 1$; $(2k - 1)x + (k - 1)y = 2k + 1$ [CBSE 11]
 24. $3x - y - 5 = 0$; $6x - 2y - k = 0$. [CBSE D 08]

Find the values of a and b for which the following systems of linear equations have an infinite number of solutions (25 – 27).

25. $2x - (a - 4)y = 2b + 1$; $4x - (a - 1)y = 5b - 1$. [CBSE 10]
 26. $(2a - 1)x + 3y - 5 = 0$; $3x + (b - 1)y - 2 = 0$ [CBSE 10]
 27. $(a + b)x - 2by = 5a + 2b + 1$; $3x - y = 14$ [CBSE 10]

Science

Physics

1-What is difference between Reflection and Refraction

2-what is cause of refraction

3-What is refractive index.What is it's S.I.unit?

4-Draw diagram on chart paper

a)Image information for various position of image in case when object is placed at different position in case of Concave mirror.

b) various position of image in case when object is placed at different position in case of convex lens.

5-ht.of object -2cm Object distance-10 cm Radius of curvature -30cm

In case of Concave mirror, find image height.

6-What do you mean by Power of Lens . A Concave mirror has focal length 20 cm, find Power of Lens

Chemistry

1.PROJECT: Make a working model of activity- 1.7(electrolysis of water) at your home using waste.

2. Answer the intext questions and exercise questions of chapter 1 in homework copy

3. Memorise the common ions from the chart which is provided to you, and write 30 formula and name of common compounds from the chart.

Biology

1. Project:- make a model of anyone using waste material or clay.

i. Digestive system of human

ii. Human heart

iii. Human kidney

iv. Human lungs

2. Practical:-Write all experiments in practical record.

A. To check the presence of starch in leaf.

B. To demonstrate that we release carbon dioxide during respiration.

Social Science

Biological or biohazards can cause devastating effects on society and environment making generations

of a nation vulnerable to it. Select any one such disaster and prepare a report on the following aspects

of the disaster:

i) Basic characteristics and Level (epidemic or pandemic) (ii) Unicode or biohazard symbol (iii) Involvement of nodal agencies (iv) Legislations (v) Responsibility sharing (vi) Occupations /workplace where people may come into contact (vii) Prevention and control measures (viii) Detection and containment of outbreak (ix) Any other relevant information pertaining to the disaster. Students can use newspaper clippings, photographs, maps, diagrams etc. as illustrations.

OBJECTIVES:

- ☐ To develop skills to comprehend, analyze, interpret and evaluate evidences.
- ☐ To communicate data in the most appropriate form using a variety of techniques.
- ☐ To grow into caring, sensitive individuals capable of making informed, intelligent and independent choices.

The project work can culminate in the form of Charts and albums.

MAP WORK: Students are required to complete the list of maps as per the syllabus covered and compile the same in a file

I-RISE OF NATIONALISM IN EUROPE

UNIFICATION OF ITALY/ UNIFICATION OF GERMANY.

The assignment has to be prepared of 4-5 pages on the Unification of Italy or Unification of Germany. The assignment must include the reasons for the unification and nationalism within these nations and how the unification brought changes and revolutions in the whole of the European countries.

LEARNING OUTCOMES:

- ☐ Recognizes the role of Otto Van Bismarck in the unification of Germany.
- ☐ Observes the map of Italy and understand the various developments responsible for the unification of Italy.

The assignment must include the following:

- 1) Index
- 2) Maps
- 3) Pictures of Unification
- 4) A good web search of Unification of Italy /Unification of Germany.

2- CIVICS :-

-Take the example of your own state or any other state that was affected by linguistic reorganisation. Write a short note on it.

- Has your village or town remained under the same States since independence ? If not what was the name of the earlier state.

ECONOMICS

Q1. Give three examples where an average is used for comparing situations .

Q2. Write a paragraph on your nation of what should India do or achieve to become a developed country .

Q3. Calculate your BMI .



