



K. C. PUBLIC SCHOOL, JAMMU

HOLIDAYS HOME WORK

Subject: English

CLASS: X

- Surf the net to find inspirational stories about people who rose from humble beginning to reach the ladder of success. Write a letter to your friend telling him about any one person's difficulties that he encounter and how he overcame them through the will power and tenacity. Also mention his achievements.
- Write a paragraph on 'Responsible about being a global citizen'.
- For the joy of reading, read the novel 'The diary of a young girl'.
- Revise all the chapters done in the class.

Subject: Science

Q.NO.1:-Write a detailed note on the influence of human activities on natural resources.

Q.NO.2:-Write a note to develop awareness of the need and responsibility to keep the natural system in a condition that it sustains life.

Q.NO.3:-Write a note to develop an understanding of how local environments contribute to the global environment.

Subject: Mathematics

Topic: Pair of Linear Equations in Two Variables

1. The ratio of incomes of two friends Anjali and Abdul is 9: 7 and the ratio of their expenditures is 4: 3. If each of them saves Rs 4000 per month, find their monthly incomes. Also, if each of them donates 1% of her/his income to a charity working for old age destitute, find the resulting savings of each. What value is indicated from this action?
2. A boat goes 24 km upstream and 28 km downstream in 6 hours. It goes 30 km upstream and 21 km downstream in $6\frac{1}{2}$ hours. Find the speed of the boat in still water and also speed of the stream.
3. The angles of a cyclic quadrilateral ABCD are $\angle A = (6x + 10)^\circ$, $\angle B = (5x)^\circ$, $\angle C = (x + y)^\circ$, $\angle D = (3y - 10)^\circ$. Find x and y and hence the values of the four angles.
4. The sum of the numerator and the denominator of a fraction is 8. If 3 is added to both numerator and the denominator, the fraction becomes $\frac{3}{4}$. Find the fraction.
5. Determine the values of m and n so that the following pair of linear equations have infinite number of solutions: (i) $(2m - 1)x + 3y = 5$; $3x + (n - 1)y = 2$
(ii) $2x + 3y = 7$; $2mx + (m + n)y = 28$
6. Solve for x and y using cross multiplication method : $\frac{x}{a} - \frac{y}{b} = a - b$; $ax + by = a^3 + b^3$
7. Solve for x and y, given $\frac{2}{x} + \frac{2}{3y} = \frac{1}{6}$; $\frac{3}{x} + \frac{2}{y} = 0$, $x \neq 0$, $y \neq 0$ Hence find m for which $y = mx - 4$.
8. Solve the following pair of linear equations graphically $x + 3y = 6$; $2x - 3y = 12$ Also, find the area of the triangle formed by the lines representing the given equations with y- axis.
9. Draw the graphs of the following equations: $2x - 3y + 6 = 0$; $2x + 3y - 18 = 0$; $y - 2 = 0$. Find the vertices of the triangle so obtained. Also, find the area of the triangle.
10. A railway half ticket costs half the full fare and the reservation charge is the same on half ticket as on full ticket. One reserved first class ticket from Mumbai to Ahmedabad costs Rs216 and one full and one half reserved first class tickets costs Rs 327. What is the basic first class full fare and what is the reservation charge.
11. Solve for x and y: $99x + 101y = 99$; $101x + 99y = 101$

Topic: Real Numbers and Polynomials

- 1 The LCM of two numbers is 14 times their HCF. The sum of LCM and HCF is 600. If one number is 280, then find the other number
- 2 On Sunday, Kanab, Arnab and Pranab the three volunteers of school's nature club went around a circular mall road with 3 banners in hands 'Say No To Plastics'. They knowingly planned 16 minutes for Kanab, 24 minutes for Arnab and 30 minutes for Pranab to walk around the circular mall continuously. Suppose each of them started activity from the same point in same direction at 10.00 a. m. At what time will all of them meet again at the starting point? (i) What are the harmful effects of using plastics? (ii) What values were depicted by Kanab, Arnab and Pranab in organizing such campaign?
- 3 Find the HCF of 180, 252 and 324 using Euclid's Division algorithm.
- 4 Find the HCF and LCM of 360, 520 and 126 by the prime factorization method. Also, show that $\text{HCF} \times \text{LCM} \neq \text{Product of three given numbers}$.
- 5 Prove that $\sqrt{2} - \sqrt{5}$ is an irrational number.
- 6 If the zeroes of the polynomial $x^2 + px + q$ are double in value to the zeroes of $2x^2 - 5x - 3$, find the values of p and q.
- 7 Form a quadratic polynomial whose zeroes are $\frac{3-\sqrt{3}}{5}$ and $\frac{3+\sqrt{3}}{5}$.
- 8 If α and β are the zeroes of the polynomial $x^2 - 5x + 6$, then find the polynomial whose zeroes are $\frac{1}{\alpha}$ and $\frac{1}{\beta}$.
- 9 On dividing $3x^3 + 4x^2 + 5x - 13$ by a polynomial $g(x)$, the quotient and remainder were $3x + 10$ and $16x - 43$ respectively. Find the polynomial $g(x)$.
- 10 Find all zeroes of the polynomial $x^4 - 3x^3 - 5x^2 + 21x - 14$, if two of its zeroes are $\sqrt{7}$ and $-\sqrt{7}$.
- 11 If α and β are the zeroes of the quadratic polynomial $x^2 - 6x + a$, find the value of a, if $3\alpha + 2\beta = 20$.
- 12 Find the zeroes of the polynomial $x^2 + \frac{1}{6}x - 2$ and verify the relationship between the coefficients and the zeroes of the polynomial.
- 13 If α and β are the zeroes of the quadratic polynomial $f(x) = x^2 - 2x + 1$, find a quadratic polynomial whose zeroes are $\frac{2\alpha}{\beta}$ and $\frac{2\beta}{\alpha}$.

Subject: S. Sc.

1. Write an article on "CPEC : The new silk route between China and Pakistan".
2. Do a case study on the lack of Australian political diversity among ethnic minorities. Compare it with the Indian political scenario.

Write the comparative case study report in your class notebook.

Subject: Hindi

1. विद्यालय के प्रति अपनी जिम्मेदारियों को कविता या अनुच्छेद के रूप में लिखें ।(पुराने कैलेंडर का इस्तेमाल करते हुए)
2. दिए गए विषयों में से किसी भी एक विषय पर कॉमिक का निर्माण करें ।(जिम्मेदारी, हौंसला, पर्यावरण, स्वच्छता तथा अनेकता में एकता),

Subject: FIT

Create a webpage on the topic "Wonders of the World"

Note: -

1. The background color of the web page
2. Insert an image of each wonder.
3. Give text information about each wonder of the world.
4. Create a hyperlink on your e-mail ID at the bottom of the webpage.