

Maharaja Sawai Man Singh Vidyalyaya

Holiday Assignment

ENGLISH

Illustrate a self composed poem of two stanza/ two poems of one stanza each, based on the theme- **WATER** on an A4 size sheet. Each stanza must comprise of four lines.

Mathematics

WORKSHEET NO 1

- Q1 If $\text{HCF}(225, 60) = 225 \cdot 60 - 10x$, then find the value of x .
- Q2 If n is an odd integer, then show that $n^2 - 1$ is divisible by 8.
- Q3. The traffic lights at three different road crossings change after every 48 seconds, 72 seconds, and 108 seconds. If they change simultaneously at 9:00 a.m. after what time will they change again simultaneously.
- Q4 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.
- Q5 Prove that $\sqrt{3} + \sqrt{5}$ is irrational.
- Q6 Show that 9^n cannot end with the digit 2 for any natural number n .
- Q7 Show that the number $23 \cdot 17 \cdot 5 \cdot 3^2 + 23$ is a composite number.
- Q8 Prove that $5 + 3\sqrt{2}$ is irrational.
- Q9 What is the smallest number that when divided by 35, 56 and 91 leaves remainder 7 in each case?
- Q10 Show that the product of three consecutive positive integers is divisible by 6.

Worksheet no 2

- Q1 If α and β are the roots of the quadratic polynomial $p(x) = x^2 - (k-6)x + (2k+1)$, find the value of k if $\alpha + \beta = \alpha\beta$.
- Q2 If α and β are the roots of the quadratic polynomial $p(x) = x^2 - (k+6)x + 2(2k-1)$. Find the value of k if $\alpha + \beta = \alpha\beta/2$.
- Q3 If α and β are the zeroes of the quadratic polynomial $x^2 - 4x + 3$, then form a quadratic polynomial whose zeroes are 3α and 3β .
- Q4 If α and β are the zeroes of the quadratic polynomial $25x^2 - 15x + 2$, then form a quadratic polynomial whose zeroes are $\frac{1}{2\alpha}$ & $\frac{1}{2\beta}$.
- Q5 If α and β are the zeroes of the quadratic polynomial $x^2 - 6x + a$, then find the value of a .

if $3\alpha + 2\beta = 20$.

- Q6 If α, β, γ are the zeroes of the polynomial $6x^3 + 3x^2 - 5x + 1$, then find the value of $\alpha^{-1} + \beta^{-1} + \gamma^{-1}$.
- Q7 If two zeroes of the polynomial $p(x) = x^4 - 6x^3 - 26x^2 + 138x - 35$ are $2 \pm \sqrt{3}$ Find the other zeroes.
- Q8 If the polynomial $6x^4 + 8x^3 + 17x^2 + 21x + 7$ is divided by another polynomial $3x^2 + 4x + 1$, the remainder comes out to be $(ax+b)$, find a and b.
- Q9 For what value of k, 3 is a zero of the polynomial $2x^2 + x + k$?
- Q10 Find quadratic polynomial with zeroes $3 \pm \sqrt{2}$.

Worksheet no 3

- Q1 If the system of equations $2x + 3y = 7$ and $2ax + (a+b)y = 28$ represent coincident lines, then find the relation between a and b.
- Q2 Solve for x and y $\frac{x+1}{2} + \frac{y-1}{3} = 9$
 $\frac{x-1}{3} + \frac{y+1}{2} = 8$
- Q3 Solve for x and y $\frac{ax}{b} - \frac{by}{a} = a+b$
 $ax - by = 2ab$
- Q4 Solve $47x + 31y = 63$
 $31x + 47y = 15$ by cross multiplication method.
- Q5. Vijay had some bananas and he divided them into two lots A and B. He sold the first lot at the rate of Rs.2 for three bananas and the second lot at the rate of Rs.1 per banana and got a total of Rs.400. If we had sold the first lot at the rate of Rs. 1 per banana and the second lot at the rate of Rs.4 for 5 bananas, his total collection would have been Rs.460. Find the total no. of bananas he had?
- Q6. Six years hence a man's age will be 3 times his son's age and three years ago he was 9 times as old as his son. Find their present ages?
- Q7. The ratio of incomes of two persons is 9:7 and the ratio of their expenditures is 4:3. If each one of them manages to save Rs.2000 per month, find their monthly incomes?
- Q8. Draw the graph of $2x + y = 6$ and $2x - y + 2 = 0$. Shade the region bounded by these lines with x-axis. Find the area of the shaded region?
- Q9. The sum of the digits of a 2 digit no. is 15. The no. obtained by interchanging the digit exceeds the given no. by 9. Find the no.?
- Q10. Ankush cycles for x hours at 20 km/hour and then for y hours at 16 km/hour. If he cycles 68 km all together in 4 hours. Find x and y. Write the importance of cycling in students life.

Computer Science

1	Your-self composed poem on ‘water’ is to be typed and the printout to be pasted in computer copy with following specifications.
	<ul style="list-style-type: none">• TITLE - Center and Bold, color – Red , font size - 14
	<ul style="list-style-type: none">• The stanzas to be left aligned, font size - 12 and color – blue.
	<ul style="list-style-type: none">• Footer – Your name, class & sec.
	<ul style="list-style-type: none">• Insert any picture on ‘Water’ as watermark.
2	Mention in detail the usage of computer/software in accomplishing your holiday assignment of other subjects

Economics

Write down the contribution of primary, secondary and tertiary sectors towards the economic development of the country.

French

Créez, en groupe de 2-3, un poster de taille A4, avec un petit slogan/ poème en donnant l’importance de l’eau.

HISTORY

Collect information related to the First World War OR The Second World War under the following headings.

First World War

1.Introduction

2.Key Players

3. Causes

4. Consequences

5.Formation of the League of Nations

6.Summary

Second World War

- 1.Introduction
- 2.Key Players
- 3.Causes
- 4.Consequences
5. Formation of the United Nations
- 6 Summary

The same will have to be compiled in the class after the summer break

विषय -हिंदी

राजा -महाराजाओ के समय से ही जल -संरक्षण एवं जल भंडारण के लिए विभिन्न उपाय किए जा रहे हैं। किन्हीं पाँच जल -संरक्षण के प्राचीन उपायों के बारे में संक्षिप्त एवं सचित्र जानकारी दीजिए।

GEOGRAPHY

Disaster Management

Topic: First Aid

Prepare an illustrated 'pocket' First Aid Guide. Write about any five of the following injuries/conditions:

- a) Burns b) Fractures c) Heat stroke d) Snake bite or Dog bite e) Bruises and open wounds f) Nose bleed.

- Begin with a brief introduction to 'First Aid'.
- Include a brief description of the injury or condition, symptoms, 'Dos and Don'ts' or precautions and prevention (if relevant e.g. heat strokes can be prevented).
- Use pictures and drawings to illustrate the guide.
- The size of the booklet must not exceed that of the school diary.
- Credit will be given to content/information, illustrations, overall presentation, neatness and creativity.
- Number of pages – approximately 15

संस्कृत

'जल के महत्त्व' -इस विषय पर आत्मकथा ,कहानी या पांच स्लोगन संस्कृत में लिखिए।

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Science-Physics

1.Calculate the work done in moving a charge of 4 coulombs from a point at 220 volts to another at 230 volts.

2.How many microamperes are there in 1 ampere?

3. Fill in the blanks:-

- I. A current is a flow of ____ .For this to happen there must be a ____ circuit.
- II. Current is measured in ____ using an ____ placed in ____ in a circuit.

4.A radio set draws a current of 0.36 A for 15 minutes. Calculate the amount of electric charge that flows through the circuit.

5.If the area of cross section of a resistance wire is halved, the its resistance becomes_____ times and new resistivity is _____.

6.A resistance of 6 ohms is connected in series with resistance of 4 ohms. A potential difference of 20 volts is applied across the combination. Calculate the current through the circuit. Also calculate the potential difference across the 6 ohm resistance and the current through it.

Biology

Activity-1: To prepare a temporary mount of a leaf peel to show and study stomata.

Activity-2: To prove experimentally that the presence of sunlight is essential for the process of photosynthesis.

Activity-3: To show experimentally that carbon dioxide is given out during respiration by germinated seeds.

Note: Do it in lab.file.

Write all the steps (Objective.....Precautions)

Draw neat & labeled diagrams.

Submit in the first week of July.