



KENDRIYA VIDYALAYA ADOOR

PATHANAMTHITTA



SUMMER CHALLENGE 2020-21
CLASS X

Dear Parents,

Summer vacation is here. There are plenty of productive ways a child can spend the vacation which can be fun, relaxing and helpful for his/her education. We wish to imbibe in our students the willingness to spend their summer vacation well; making optimum utilisation of time, following their passion and also at the same time enhancing their knowledge.

Like previous years, we have prepared the holiday homework to bridge the gap between academic years and to keep children engaged in creative and learning exercises during the holidays. Please ensure that the children do not finish assignments in bulk at a time. Let them do it at intervals spending few hours a week.

During the holidays, encourage the children to speak in English. Motivate your child to read newspapers as it not only enhances the child's knowledge about the world but also shapes his reading and writing skills as well as grammar.

During this difficult time of Corona virus disease, mental wellbeing of our children is a matter of top priority to us. Hence for guiding and counselling the students we have created a dedicated email id kvadooracademichelp@gmail.com. You may share your apprehensions and problems through this id.

We wish your ward a very rejuvenating vacation and seeking your cooperation in all our endeavours as always.

ENGLISH

Assignment #1

Three topics are given below. Choose any two of the topics and do your research on those topics, compile it in any form (note books, file, rough sheets)

Topics

1. Black Americans and their fight against discrimination
2. Women and their fight for equality
3. The Vietnamese and their fight for independence.

Assignment #2

Make a diary entry of your experiences during the LOCK DOWN PERIOD. Conclude with what valuable lessons of life you understood and how it changed you from a mere human being to BEINGHUMAN.

Assignment #3

ANGER MANAGEMENT. One important thing to learn and master in our life is to MANAGE OUR TEMPER. Some of us tend to get angry quickly. Can you think about 3 ill effects of anger?? Note them down. Suggest ways to avoid losing TEMPER in such situations. Are there any benefits from anger??

HINDI

1 स्वाधीनता आंदोलन में सुभाषचंद्र बोस की देन पर एक प्रायोजना तैयार कीजिए । (A 4 paper या scrap book)

2 निबंध लेखन: (250 शब्दों में- HW book)

वन और हमारा पर्यावरण

खाद्य पदार्थों में मिलावट की समस्या

भ्रष्टाचार : देश की उन्नति में बाधक

3 पत्र-लेखन (HW book)

आपके मोहल्ले में फैली गंदगी और उसके कारण उत्पन्न समस्याओं का उल्लेख करते हुए नगर निगम अधिकारी को पत्र लिखिए ।

अपने भाई को नैतिक-मूल्यों के महत्व के बारे में पत्र लिखिए ।

SANSKRIT

अवकाशकालीनगृहकार्यः

Home work book

- 1 दीर्घ,गुण,वृद्धिसन्धीनांप्रत्येकंपञ्चविंशतिः उदाहरणानिलिखत।
- 2 क्वा ,तुमुन्त्यप्रत्ययानांप्रत्येकंप्रत्ययस्यकृतेपञ्चविंशतिः उदाहरणानिलिखत।
- 3 कृ,हश्,अस्, धाव्धातूनांपञ्चलकारेषुरूपाणिलिखत।
- 4 किं,अस्मद्,युष्मद्,तत्, अकारान्त, इकारान्तउकारान्त,ऋकारान्तशब्दरूपाणिलिखत।
- 5 पञ्चपत्राणिलिखत।

A4 size paper

- 1 पञ्चचित्राणिदृष्ट्वाप्रत्येकंचित्रस्यकृतेपञ्चपञ्चसंस्कृतवाक्यानिलिखत।
- 2 निबन्धलेखनम्- 1 श्रीमद् भगवद्गीता 2 अस्माकंदेशः 3 कालिदासः
- 3 पञ्चविंशतिः अव्ययपदानिउपयुज्यवाक्यरचना।
- 4 पञ्चदशसुभाषितानांअर्थसहितलेखनम्।

120 page class work book & 120 page home work book for Sanskrit

MATHS

QI Factorise the following quadratic polynomials by splitting the middle term
[Refer class IX , chapter 2 , Ex 2.4 ,Q4]

- | | | |
|------------------------|------------------------|------------------------|
| 1) $4x^2 + 5x - 21$ | 2) $3x^2 - 19x + 16$ | 3) $2x^2 + 11x - 90$ |
| 4) $6x^2 + 11x - 10$ | 5) $9x^2 - 47x + 10$ | 6) $2x^2 + 9x + 10$ |
| 7) $6x^2 + 5x - 6$ | 8) $6x^2 - 19x - 20$ | 9) $3x^2 - 11x - 4$ |
| 10) $9x^2 - 3x - 2$ | 11) $3x^2 + 10x + 8$ | 12) $6x^2 - x - 2$ |
| 13) $2x^2 + 11x + 12$ | 14) $4x^2 + 16x + 15$ | 15) $6x^2 - 5x - 4$ |
| 16) $6x^2 - 19x + 10$ | 17) $25x^2 - 35x + 12$ | 18) $35x^2 + 13x - 12$ |
| 19) $2x^2 + 3x + 1$ | 20) $12x^2 + 46x + 20$ | 21) $12x^2 - 32x + 20$ |
| 22) $12x^2 + 22x - 20$ | 23) $10x^2 - 17x + 3$ | 24) $5x^2 - 19x - 4$ |
| 25) $5x^2 - 9x - 38$ | | |

QII Do as directed

- If one zero of the quadratic polynomial $x^2 + 3x + k$ is 2, then find the value of k.
- If $(x + 1)$ is a factor of $x^2 - 3ax + 3a - 7$, then find the value of a.
- If 1 is a zero of the polynomial $p(x) = ax^2 - 3(a - 1)x - 1$, then find the value of a.
- Find the value of k, if $x - 1$ is a factor of $p(x) = x^2 + x + k$.
- Find the value of k, if $x + 1$ is a factor of $p(x) = kx^2 - 3x + k$.
- If $(x + 1)$ is a factor of $x^2 - 3ax + 3a - 7$, then find the value of a.

Task :Write the squares of natural numbers from 1 to 30 and then **learn them by heart**

Q III Find the square roots of the following numbers by division method

- | | | | |
|-----------|-----------|-----------|-----------|
| a) 5329 | b) 3844 | c) 4096 | d) 7921 |
| e) 6084 | f) 3721 | g) 7396 | h) 8649 |
| i) 5184 | j) 4356 | k) 7225 | l) 9801 |
| m) 13689 | n) 61504 | o) 874225 | p) 364816 |
| q) 177241 | r) 580644 | s) 820836 | t) 182329 |

Q IV Find the decimal expansions of

- $\frac{10}{3}$
- b) $\frac{7}{8}$
- c) $\frac{1}{7}$
- d) $\sqrt{3}$

Now state the **nature of decimal expansion** of

- A rational number ii) An irrational number

Q V Write the general form of a linear equation in two variables .

QVI Write the equation $2x + 3y = 15$ in the form $ax + by + c = 0$ and indicate the values of **a, b** and **c**.

QVII Draw the graphs of the following

- $x + 2y = 6$ b) $x - y = 2$ c) $x + y = 4$

QVIII In each of the following, **draw the graphs of both the equations on the same graph paper**.

Then write the coordinates of the point, where the two lines intersect.

- $x + y = 4$; $2x + 3y = 11$ b) $x + y = 5$; $4x + 3y = 17$ c) $2x - y = 2$; $4x - y = 8$

QIX Construct the following angles using ruler and compasses only

- a) 60° b) 30° c) 90° d) 45° e) 75° f) 120°

Task: **Learn the following formulae by heart**

Shapes	Base area	Base perimeter	Volume	L S A	T S A
Cuboid	Lb	$2(l + b)$	lbh	$2(l + b)h$	$2(lb + bh + lh)$
Cube	a^2	$4a$	a^3	$4a^2$	$6a^2$
Cylinder	πr^2	$2\pi r$	$\pi r^2 h$	$2\pi r h$	$2\pi r (r + h)$
Cone	πr^2	$2\pi r$	$\frac{1}{3} \pi r^2 h$	$\pi r l$	$\pi r (r + l)$
Sphere	---	-----	$\frac{4}{3} \pi r^3$		$4\pi r^2$
Hemisphere	πr^2	$2\pi r$	$\frac{2}{3} \pi r^3$	$2\pi r^2$	$3\pi r^2$
Cylindrical pipe	$\pi (R^2 - r^2)$		$\pi (R^2 - r^2) h$	$2\pi R h$, $2 \pi r h$	
Hemispherical shell	$\pi (R^2 - r^2)$		$\frac{2}{3} \pi (R^3 - r^3)$	$2\pi R^2$ $2\pi r^2$	

QX) Answer the following questions .

- i) A solid spherical ball of diameter 4.2 cm is completely immersed in water. How much water is displaced?
- ii) A conical tent is 5 m high and 24 m in diameter. Find the cost of canvas used in making the tent at the rate of Rs 7 per sq m.
- iii) The inner diameter of a cylindrical pipe is 24 cm and its outer diameter is 28 cm. The length of the pipe is 35 cm. Find the volume of the pipe.

- iv) We want to make a closed cylindrical storage tank of height 2 m and base diameter 210 cm from a 9 metal sheet. How many square metres of the sheet are required for the purpose ?
- v) The height and base diameter of a conical tent is 16 m and 24 m respectively. Find the cost of canvas required to make it at the rate of Rs 210 per m²?
- vi) A cone of height 24 cm has a curved surface area 550 cm². Find its volume
- vii) Find the volume and surface area of a cuboid of dimensions 50cm × 42cm × 15cm.
- ix) The total surface area of a cube is 96 cm². Find the volume of the cube.
- x) Find the Curved surface area and volume of a hemisphere of radius 7cm.

- Q XI) i) what is the class mark / mid-value of the class interval 20 – 30
- ii) Find the mean of first five prime numbers .
- iii) Find the median of the **data** 78, 56, 22, 34, 45, 54, 39, 68, 54, 84
- iv) The mean of 10, 12, 18, 13, x and 17 is 15. Find the value of x.
- vi) Find the mean of the following data :

X	4	6	8	10	12
F	4	8	14	11	3

- vii) Find the mean of the following data :

X	4	6	9	10	15
F	5	10	10	7	8

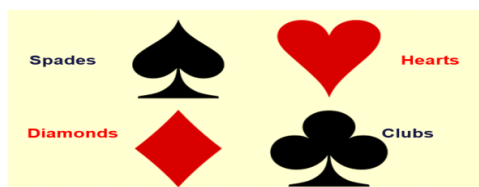
- viii) If the mean of the following data is 20.2, find the value of p.

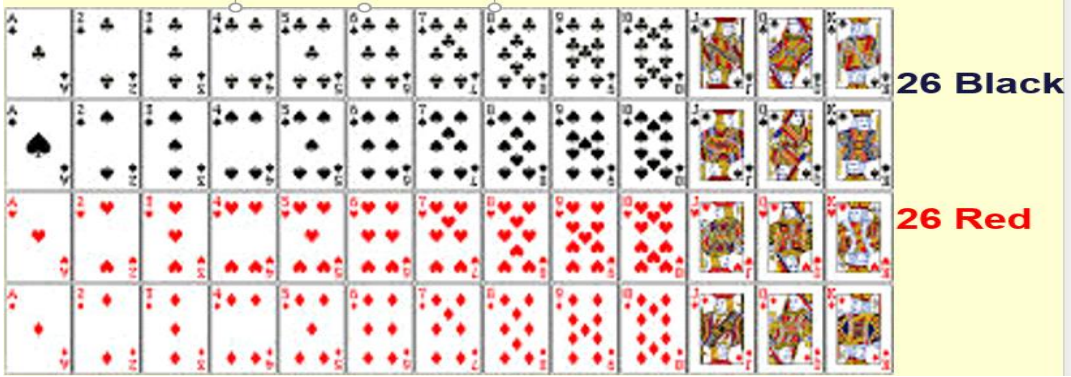
X	10	15	20	25	30
F	6	8	p	10	6

Task : Learn the Prime numbers less than 100 , by heart.

**2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43,
47, 53, 59, 61, 67, 71, 73, 79, 83, 89 and 97**

Task:Take a deck of playing cardsand get familiar with the types of cards





SCIENCE

Note: Write this in your CW and HW books. Phy, Chem and Bio separate note book

CHEMISTRY	
1	In a tabular form write the atomic number, name, symbol, electronic configuration and valency of the first 20 elements in the periodic table. (both in cw and hw book)
2	Draw the table of ions showing valency of various monovalent divalent and trivalent monoatomic as well as poly atomic ions (ref -class ix text book) in both cw and hw
3	Write the formula of the following 1. aluminium sulphate 2. aluminium oxide 3. aluminium hydroxide 4. zinc nitrate 5. calcium carbonate 6. magnesium chloride 7. sodium carbonate 8. sodium hydrogen carbonate 9. ammonium chloride 10. ferrous sulphate
4	Write any four difference in properties of metals and non-metals with suitable examples

PHYSICS	
1	Define reflection of light.
2	Write the laws of reflection of light
3	Draw the ray diagram of image formation by a plane mirror. Also write the position, size and nature of image.
4	Distinguish between real image and virtual image
5	Draw the ray diagram of image formation by i) Concave Mirror ii) Convex Mirror. (What you already learnt in 8 th class)
6	Define refraction of light.

BIOLOGY	
1	Draw a neat labelled diagram of human digestive system.
2	Name the green pigment that found in the plants. Mention its function.
3	Name the hormones that secreted by the following Glands and their functions a) Pituitary

	<p>b) Adrenal</p> <p>c)Pancreas</p> <p>d)Ovary</p>
4	Draw a neat labelled diagram of stomatal apparatus and explains how does it functions.
5	Why it is not advisable to sleep under the trees during the night times?
6	Mention the functions of human blood
7	What is plasma? How does it differ from serum?
8	Draw a neat labelled diagram of human heart
9	What do you understand by double circulation of blood ?How does it benefit an organism
10	What are contraceptives? How does it regulate human population?
11	Draw the neat labelled diagram of Excretory organ(Kidney) of man

SOCIAL SCIENCE

1. Prepare five fill in the blanks or multiple-choice questions with answers each from the following chapters.

The Rise of Nationalism in Europe (History – chapter : 1)

Resources and Development (Geography – chapter : 1)

Power-sharing (Political Science – chapter : 1)

Development (Economics – chapter : 1) (5 x 4 = 20 Marks)

2. Explain the classification of resources on the basis of origin, exhaustibility, ownership and status of development. Give examples of at least two resources from each category. (Geography, chapter – 1) (5 Marks)

3. Explain the features of various soil types found in India. (Geography, chapter – 1) (5 Marks)

4. Prepare a project report on **any one** of the following topic.

Consumer awareness

Social issues

Sustainable development (20 Marks)

The project should be handwritten by the students themselves.

Note: You may download the pdf version of NCERT text book from its official website. <http://ncert.nic.in/textbook/textbook.htm>

Text Books:

India and the Contemporary World – II (History)

Contemporary India – II (Geography)

Democratic Politics – II (Political Science)

Understanding Economic Development (Economics)