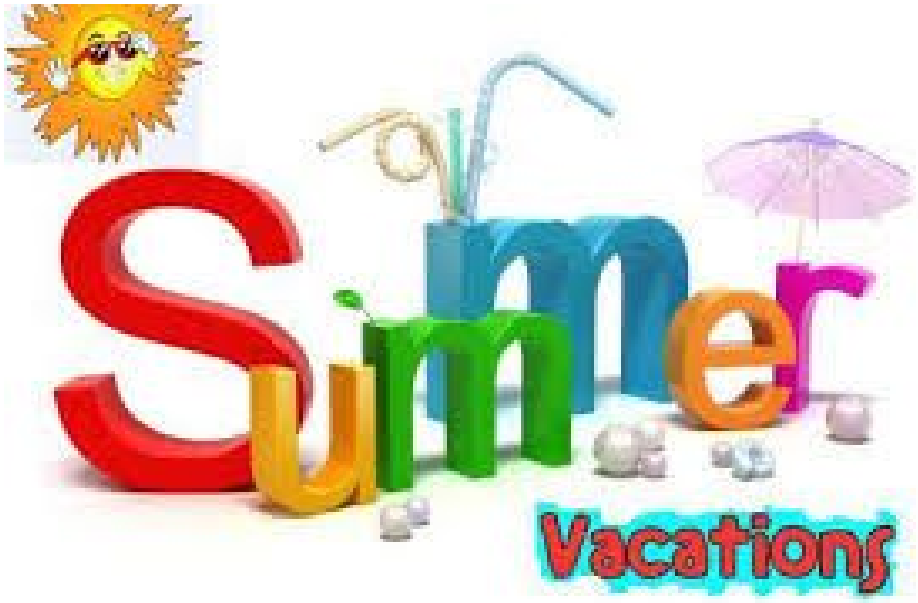
SHRI JAIN PUBLIC SCHOOL,
BIKANER

HOLIDAY HOMEWORK
CLASS - IX
(2018-19)

Holiday homework is an attempt to channelize the creative energy of the children. Doing it in the right- spirit with enthusiasm will make it a great learning experience. Make sure that your work is neat, presentable, original and conforms to the guidelines.



LEARN TO BE SAFE:

- Do not go out alone without an elder to accompany you.
- Never talk to strangers.
- Do not accept gifts/eatables from strangers.
- Play in a fenced area and not on streets.
- Scream for help in case you feel you are in danger.
- Memorise your parent's phone numbers.
- If you find yourself lost in a market ask for someone to give a call to your parents.

LEARN TO BE RESPONSIBLE AND DEVELOP PERSONAL SKILLS:

- Take up one task everyday and figure out how you will complete this task.
- Keep things in their proper places so as to keep your bedroom clean.
- Help your mother in laundary.
- Water the plants.
- Dust and clean your room.
- Look after your younger brother or sister.
- Set the dining table for your family.
- Feed your pet if you have one.

DEVELOP PERSONAL HYGIENE:

- Keep your surroundings clean.
- Trim your nails once a week.
- Early to bed, early to rise, Plenty of sleep helps you concentrate.
- Wash your hands before and after meals.
- Wash your hair and keep it neat by combing.
- Bath or shower daily. Wash hands after using the toilet.
- Eat a healthy and balanced diet.

ENGLISH

- You are Abhimanyu of ABC Public School, Gwalior. Your debut in a cricket match was a great event of your life. Taking help from the information given below, make a diary entry on 'My debut in a cricket match' (100-120 words)
  Hints- Cold _____ January- March morning- but I was excited - I had got a place in my school cricket team- inter school competition _____ final match _____ Sunny Public School _____ our rival won the toss _____ we chose to field first _____ 320 runs target _____ our openers were out cheaply _____ heart beating _____ determined to stay _____ got the rhythm _____ stroking the ball well _____ completed half century _____ losing my companions _____ only 5 runs short of my century and a great win.
- Write an article on 'Books- our Best Companions' (100-120 words)
- Complete this story in 150-200 words.
  Once there was a greedy king in a kingdom. He craved for a lot of gold. He continuously worshiped the goddess Lakshmi and got a boon that whatever he would touch, that would become gold.....

HINDI

- निम्न लिखित विषयों पर 200 शब्दों में अनुच्छेद लिखिए–

  (1) पर्यटन व उसका महत्व

  (2) विद्यार्थी और अनुशासन

  (3) सिनेमा के लाभ व हानियाँ

- निम्नलिखित विषयों पर अनौपचारिक पत्र लिखिए–

(1) बड़ों के प्रति आदर भाव रखते हुए उनके जीवन के अनुभवों से प्रेरणा की सीख लेने हेतु छोटे भाई को पत्र लिखिए।

(2) विद्यालय की ओर से ताजमहल भ्रमण के अनुभव बताते हुए पिताजी को पत्र लिखिए।

(3) विद्यालय में आयोजित सफाई अभियान में श्रमदान करने के अनुभव का वर्णन करते हुए अपनी बड़ी बहन को पत्र लिखिए।

MATHS

- **Solve the worksheet given at the end in your Maths note book.**

SCIENCE

- Write (Experiment no. 1 to 10) from Lab manual in Practical note book.

SOCIAL SCIENCE

- Locate and label the following in a Political Map of India:

[Map 1]

(i) Tropic of Cancer (ii) Longitudinal extent

(iii) Latitudinal Extent (iv) Standard Meridian

(v) Locate all the states with their capitals

[Map 2]

(i) Mark the states through which Topic of cancer passes in India.

(ii) Mark the neighbouring countries of India's in North-West, North, Eastern and Southern

* Map 1 and Map 2 should be done in two different maps and to be pasted in Geography note book.

Note:-

1. *All written work to be done in respective subject notebooks.*
2. *Student's own creativity and work will be appreciated. Parents are requested not to do the work.*
3. *Stay indoors in the afternoon.*
4. *Drink plenty of water every day.*
5. *Read newspaper daily and listen news headlines to keep yourself updated.*
6. *5 Marks will be assigned for each subject Holiday Homework.*
7. *Students need to learn all the work done in books and notes books for Term I exam.*

A teacher's purpose is not to create
students in his own image,
but to develop students
who can create their own image.

SHRI JAIN PUBLIC SCHOOL

Class -IX

Sub- Maths **HOLIDAY HOMEWORK**

Q.1 A rational number $\frac{m}{n}$ is said to be in its lowest terms when:

(a) m and n belongs to set of whole numbers
(b) m and n belongs to set of integers.
(c) m and n have no common factor other than 1
(d) gcd (m,n) is not equal to 1

Q.2 Which of the following is a rational number between $\frac{-3}{13}$ and $\frac{9}{13}$?

(a) $\frac{-14}{65}$ (b) $\frac{-31}{130}$

(c) $\frac{-16}{130}$ (d) none of these

Q.3 What is the decimal expansion of $\frac{2157}{625}$?

(a) $3.\overline{4512}$ (b) 3.45120

(c) 3.46153 (d) 3.04512

Q.4 Which of the following is an irrational number?

(a) $\frac{22}{7}$ (b) $\sqrt{49}$

(c) $\frac{35}{\sqrt{100}}$ (d) none of these

Q.5 The decimal expansion of is π is _____?

(a) terminating (b) non-terminating, repeating

(c) non-terminating non-repeating (d) can't say

Q.6 For all rational numbers in the form $\frac{p}{q}$ (q # 0), where p and q are integers with no common factors other than 1 and having terminating decimal representation can you guess what property q must satisfy?

(a) prime factorisation of q has only powers of 2.
(b) prime factorisation of q has only power of 5
(c) prime factorisation of q has only power of 10 (d) non

Q.7 Express the decimal expansion –25.6875 in the form $\frac{p}{q}$.

(a) $\frac{-411}{16}$ (b) $\frac{-375}{21}$

(c) $\frac{-413}{16}$ (d) can't express

Q.8 Which of the following are recurring decimal expansions?

(a) 0.78585..... 0.355.... (b) 0.7858575..., 0.355.....

(c) 2.1666....., 0.1231213..... (d) none of these

Q.9 What can the maximum number of digits be in the repeating block of digits in the decimal expansion of $\frac{349}{99000}$?

(a) 3 (b) 4

(c) 5 (d) 2

Q.10 Express the decimal expansion 0.2353535..... in the form $\frac{p}{q}$

(a) $\frac{233}{990}$ (b) $\frac{466}{1980}$

(c) both a and b (d) none of these

Q.11 $\sqrt{n}$ is a rational number if_____?

(a) n is not a perfect square (b) n is a perfect square

(c) n is a perfect cube (d) can't say

Q.12 Product of rational number and an irrational number is always_____?

(a) rational number (b) irrational number

(c) can be rational or irrational number (d) integer

Q.13 Express the decimal expansion $15.7\overline{12}$ in the form $\frac{p}{q}$

(a) $\frac{5185}{330}$ (b) $\frac{1037}{66}$

(c) both a and b (d) none of these

Q.14 A number is rational if its decimal expansion is _____?

(a) non terminating, non repeating (b) terminating

(c) terminating, repeating (d) non terminating

Q.15 Sum of two irrational numbers is always_____?

(a) irrational number (b) rational number

(c) may be rational or irrational number (d) can't say

Q.16 Product of irrational number is always_____?

(a) Irrational number (b) rational number

(c) can be rational or irrational number (d) can't say

Q.17 Which of the following is irrational number between 0.12 and 0.13?

(a) 0.110111011110..... (b) 0.121

(c) 0.129 (d) 0.120120012000....

Q.18 Which of the following numbers are irrational?

(i) $\left(\sqrt{2}+2\right)^2$ (ii) $\left(5+\sqrt{5}\right)\left(5-\sqrt{5}\right)$ (iii) $\frac{6}{2\sqrt{3}}$

(a) (i), (ii) (b) (ii), (iii)

(c) (i), (iii) (d) (i), (ii), (iii)

Q.19 Which of the following is incorrect statement?

(i) sum of two irrational numbers is always irrational

(ii) sum of a rational and irrational number is always an irrational number

(iii) square of an irrational number is always a rational number

(iv) sum of two rational number can never be an integer:

(a) (i), (iv) (b) (ii)

(c) (i), (iii), (iv) (d) (i), (ii), (iii), (iv)

Q.20 Every point on a number line represents:

(a) a unique real number (b) an irrational number

(c) a natural number (d) a rational number

Q.21 An irrational number between 2 and 2.5 is

(a) $\sqrt{11}$ (b) $\sqrt{5}$

(c) $\sqrt{22.5}$ (d) $\sqrt{12.5}$

Q.22 The smallest rational number by which $\frac{1}{3}$ should be multiplied so that its decimal expansion terminates after one place of decimal is:

(a) $\frac{1}{10}$ (b) $\frac{3}{10}$

(c) 3 (d) 30

Q.23 If n is a natural number, then $\sqrt{n}$ is:

(a) always a natural number

(b) always an irrational number

(c) always an irrational number

(d) sometimes a natural number and sometimes an irrational number

Q.24 The number of consecutive zeros in $2^3 \times 3^4 \times 5^4 \times 7$, is:

(a) 3 (b) 2

(c) 4 (d) 5

Q.25 $0.\overline{001}$ when expressed in the form $\frac{p}{q}$ (p, q are integers, q # 0), is:

(a) $\frac{1}{1000}$ (b) $\frac{1}{100}$

(c) $\frac{1}{1999}$ (d) $\frac{1}{999}$

Q.26 If $\frac{9^n.3^2.3^n - 27^n}{3^{3m}.2^3} = \frac{1}{27}$, what is the value of m–n=?

(a) 0 (b) 1

(c) 2 (d) can't find

Q.27 Assuming that x is a positive real number and a, b, c are rational numbers, then $\left(\frac{x^a}{x^b}\right)^{1/ab}\left(\frac{x^b}{x^c}\right)^{1/bc}\left(\frac{x^c}{x^a}\right)^{1/ac} = ?$

(a) 1 (b) 0
(c) 2 (d) 3

Q.28 If abc=1 then: $\frac{1}{1+a+b^{-1}}+\frac{1}{1+b+c^{-1}}+\frac{1}{1+c+a^{-1}} = ?$

(a) 1 (b) 0
(c) 2 (d) none of these

Q.29 If a, b, c are distinct positive prime integers such that $a^2b^3c^4 = 49392$a, then value of b=?

(a) 3 (b) 7
(c) 4 (d) 2

Q.30 If $9^{x+2} = 720 + 9^x$, find the value of $(5x)^{1/x}$

(a) 5 (b) 4
(c) 1 (d) none of these

Q.31 Find the value of $\sqrt{\frac{1}{4}} + (0.01)^{\frac{-1}{2}} - (27)^{\frac{2}{3}}$

(a) 1.25 (b) 2.5
(c) 1.5 (d) 1.05

Q.32 If $x = 3$ find the value of $\left(x^{1/3} + x^{-1/3}\right)\left(x^{2/3} + x^{-2/3} - 1\right)$

(a) $\frac{3}{10}$ (b) $\frac{10}{3}$
(c) $\frac{1}{10}$ (d) $\frac{1}{3}$

Q.33 Solve the equation: $3\left(2^x + 1\right) - 2^{x+2} + 5 = 0$ for x,

(a) 3 (b) 4
(c) 2 (d) 0

Q.34 $(256)^{0.16} \times (256)^{0.09}$ is:

(a) 4 (b) 64
(c) 16 (d) 256.25

Q.35 If $\frac{2^{m+n}}{2^{n-m}} = 16$ and $a = 2^{1/10}$ then $\frac{a^{2m+n-p}}{\left(a^{m-2n+2p}\right)^{-1}} = ?$ where (p–n=4)

(a) 2 (b) $\frac{1}{4}$
(c) 9 (d) $\frac{1}{8}$

Q.36 When simplified $(256)^{-\left(4^{(-3/2)}\right)}$ is:

(a) 8 (b) $\frac{1}{8}$

(c) 2 (d) $\frac{1}{2}$

Q.37 If $g = t^{2/3} + 4t^{-1/2}$, what is the value of g when t=64?

(a) $\frac{31}{2}$ (b) $\frac{33}{2}$

(c) 16 (d) $\frac{257}{16}$

Q.38 The seventh root of x divided by the eighth root of x is:

(a) x (b) $\sqrt{x}$

(c) $\sqrt[56]{x}$ (d) $\frac{1}{\sqrt[56]{x}}$

Q.39 If $\sqrt{2^n} = 1024$, then $3^{2\left(\frac{n}{4}-4\right)} = ...$

(a) 3 (b) 9

(c) 27 (d) 81

Q.40 Find square root of $14+6\sqrt{5}$

(a) $3+\sqrt{5}$ (b) $20\sqrt{5}$

(c) $\sqrt{20\sqrt{5}}$ (d) $\sqrt{100}$

Q.41 If both a and b are rational numbers, find the values of a and b when $\frac{5+\sqrt{3}}{7-4\sqrt{3}} = 47a + \sqrt{3}b$

(a) a=46 and b= 27 (b) a = 47 and b = 27

(c) a = 43 and b = 26 (d) none of these

Q.42 If $x = \frac{1}{2-\sqrt{3}}$ x find the value of $x^3 - 2x^2 - 7x + 5$

(a) 3 (b) 2

(c) 1 (d) 0

Q.43 If $x = 2+\sqrt{3}$ find the value of $x^3 + \frac{1}{x^3}$

(a) 52 (b) 51

(c) 49 (d) 48

Q.44 Simplify $\sqrt{3+2\sqrt{2}}$

(a) $1+\sqrt{3}$ (b) $1+\sqrt{2}$

(c) $\sqrt{2}+\sqrt{3}$ (d) none of these

Q.45 Write the rationalisation factor of $\sqrt{5}-2$

(a) $2+\sqrt{5}$ (b) $2-\sqrt{5}$

(c) $\sqrt{2}+\sqrt{5}$ (d) none of these

Q.46 The rationalisation factor of $\sqrt{3}$ is:

(a) $-\sqrt{3}$ (b) $\frac{1}{\sqrt{3}}$

(c) $2\sqrt{3}$ (d) $-2\sqrt{3}$

Q.47 If $x+\sqrt{15}=4$ then $x+\frac{1}{x}$ =

(a) 2 (b) 4
(c) 8 (d) 1

Q.48 The simplest rationalising factor of $3\sqrt{500}$ is:

(a) $3\sqrt{2}$ (b) $3\sqrt{5}$
(c) $\sqrt{3}$ (d) non

Q.49 If $x=7+4\sqrt{3}$ and $xy=1,$ then $\frac{1}{x^2}+\frac{1}{y^2}=?$

(a) 64 (b) 134
(c) 194 (d) 1/49

Q.50 If $x=\frac{1+\sqrt{3}}{2}$, find the value of $4x^3+2x^2-8x+7$

(a) 10 (b) 11
(c) 9 (d) 2