

Express  $0.6 + 0.\overline{7} + 0.4\overline{7}$  in the form  $\frac{p}{q}$ , where  $p$  and  $q$  are integers and  $q \neq 0$ .

Simplify:  $\frac{7\sqrt{3}}{\sqrt{10} + \sqrt{3}} - \frac{2\sqrt{5}}{\sqrt{6} + \sqrt{5}} - \frac{3\sqrt{2}}{\sqrt{15} + 3\sqrt{2}}$ .

If  $\sqrt{2} = 1.414$ ,  $\sqrt{3} = 1.732$ , then find the value of  $\frac{4}{3\sqrt{3} - 2\sqrt{2}} + \frac{3}{3\sqrt{3} + 2\sqrt{2}}$ .

If  $a = \frac{3 + \sqrt{5}}{2}$ , then find the value of  $a^2 + \frac{1}{a^2}$ .

If  $x = \frac{\sqrt{3} + \sqrt{2}}{\sqrt{3} - \sqrt{2}}$  and  $y = \frac{\sqrt{3} - \sqrt{2}}{\sqrt{3} + \sqrt{2}}$ , then find the value of  $x^2 + y^2$ .

Simplify:  $(256)^{-\left(\frac{3}{4}\right)}$

Given that  $\sqrt{10} = 3.162$ , find the value of  $\frac{1}{\sqrt{10}}$

Simplify:  $\frac{28}{\sqrt{28} - \sqrt{7}}$

Simplify:  $16^{\frac{-1}{4}} \times \sqrt[4]{16}$

Simplify:  $\frac{\sqrt{32} + \sqrt{48}}{\sqrt{8} + \sqrt{12}}$

If  $x = 3 + 2\sqrt{2}$ , then find whether  $x + \frac{1}{x}$  is rational or irrational

If  $x = 2 + \sqrt{5}$ , find the value of (i)  $x^2 + \frac{1}{x^2}$  and (ii)  $x^2 - \frac{1}{x^2}$

Simplify by rationalizing the denominator.

(i)  $\frac{1}{\sqrt{11} + \sqrt{13}}$       (ii)  $\frac{3 - \sqrt{3}}{2 + 5\sqrt{3}}$

If  $(5)^{p-3} \times (3)^{2p-8} = 225$  then find the value of  $p$

Represent  $\sqrt{6.8}$  and  $\sqrt{5}$  geometrically.

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Explain each of the following in  $\frac{p}{q}$  form:

(i) 0.675 (ii)  $0.3\bar{2}$  (iii)  $0.12\bar{3}$       (iv)  $0.003\bar{52}$       (v)  $4.\bar{32}$  (vi) 2.317317317.....

Find two irrational numbers and two rational numbers between 0.5 and 0.55

Simplify each of the following by rationalizing the denominator.

(i)  $\frac{7 + 3\sqrt{5}}{7 - 3\sqrt{5}}$       (ii)  $\frac{2\sqrt{3} - \sqrt{5}}{2\sqrt{2} + 3\sqrt{3}}$       (iii)  $\frac{7\sqrt{3} - 5\sqrt{2}}{\sqrt{48} + \sqrt{18}}$

Simplify:- a)  $3\sqrt{5} + -\sqrt{5} + \sqrt{180}$       (b)  $\sqrt{54} + \sqrt{150}$

Give an example each of two irrational numbers, whose

- |   |   |
|---|---|
| (i) difference is a rational number     | (v) product is a rational number        |
| (ii) difference is an irrational number | (vi) product is an irrational number    |
| (iii) sum is a rational number          | (vii) quotient is a rational number     |
| (iv) sum is an irrational number        | (viii) quotient is an irrational number |

केंद्रीय विद्यालय, वायुसेना स्थल, बख्शी का तालाब, लखनऊ

ग्रीष्मकालीन अवकाश कार्य

कक्षा - नवीं

निर्देश:-सभी विद्यार्थी यह कार्य ग्रीष्मकालीन अवकाश में फाइल में करेंगे।

1. किसान के जीवन पर 100 शब्दों में एक अनुच्छेद लिखिए।

2. अपने क्षेत्र में होने वाली फसलों की जानकारी एकत्रित करके लिखिए।

3. अपनी किसी एक यात्रा का संक्षिप्त वर्णन लिखिए।

4. कबीर दास जी के कौन - से पद आपको अच्छे लगे हैं और

क्यों? उनको लिखिए।

5. किसी समाज सुधारक पर एक लेख लिखिए।

6. किसी एक स्वतंत्रता सेनानी का सचित्र वर्णन कीजिए।

7. अपने बड़े भाई की शादी में शामिल होने के लिए तीन दिन की छुट्टी हेतु प्राचार्य को एक पत्र लिखिए।

8. अपनी पाठ्यपुस्तक से उपसर्ग एवं प्रत्यय वाले 10-10 शब्द खोजकर लिखिए।

9. ग्रीष्मावकाश के दौरान स्वयं के द्वारा पढ़ी गई किसी हिंदी की पुस्तक (पाठ्यपुस्तक के अतिरिक्त) पर समीक्षा लिखिए।

10. अनुच्छेद लेखन ( शब्द सीमा-लगभग 100 शब्दों में)

क संयुक्त परिवार -आज की आवश्यकता

ख विद्यालय में मनाया गया गणतंत्र दिवस-2023

ग स्वच्छ भारत अभियान

क्षितिज भाग-1 के पाठ 1 से 3 एवं कबीर, ललछद, रसखान एवं कृतिका के पाठ 1 से 2 पढ़ें। पढ़ते समय अपने साथ पेन्सिल रखें एवं कठिन शब्द जो आपको नहीं आते उसे अंडर लाइन करें एवं अपनी फाइल में लाईन वाले पृष्ठ पर 5-5 बार सुन्दर - सुन्दर सुलेख के रूप में लिखें।

**Holiday Homework(Summer Vacation )**

**Class- IX (Science)**

1. Why do the doctor advices to put strips of wet cloth on forehead of a person having high fever?
2. The melting point of solids x,y and z are 298K, 314 K and 398 K respectively. Arrange them in the order of inter particle force of attraction.
3. Why do we feel comfortable under a fan when we are perspiring? 4 Why do solids have regular geometrical shape?
5. How does evaporation differ from cooling?
6. Describe an activity to determine the boiling point of water.
7. Water as ice has cooling effect, whereas water as steam may cause severe burn. Explain.
8. Why do we see water droplets on outer surface of glass containing ice cold water?
9. When 50 gram of sugar is dissolved in 100 ml of water, there is no increase in volume. Why?
10. Why do wet clothes dry quickly in sun than in shade?
11. Revise ch.1 and ch. 2.
12. Make ten-ten Assertion and Reason based questions from chapter 1 and 2. Also write the answer.
13. Prepare any one Project or activity (click on given link for detail)

(i) For inspire Manak Award

<https://www.inspireawards-dst.gov.in/>

(ii) ) For National Children Science Congress

<https://www.indiascienceandtechnology.gov.in/programme-schemes/human-resource-and-development/national-children%E2%80%99s-science-congress>

(iii) Information about Vidyaarthi Vigyan Manthan

<https://vikaspedia.in/education/policies-and-schemes/vidyarthi-vigyan-manthan-vvm>

(iv) For Jawaharlal Nehru National Science, Mathematics and Environmental Education <https://jnsmee.ncert.org.in/index.php/theme/subtheme/2>

(v) For National standard examination in Physics <https://iapt.org.in/?id=2431>

**KENDRIYA VIDYALAYA AFS, BKT, LUCKNOW**

**SUMMER VACATION HOME WORK**

**ENGLISH CLASS – IX A+B**

(H.W. On file papers)

1. Read any two English story books/ cartoon books/ comics book and write reviews of the books or any 2 stories.
2. Interview your parents / grandparents to find out about their schools when they were of your age. Eg. Leisure time activities, Games, Customs practiced etc. Minimum 10 questions. Make it interesting. Your interview must have a lot of details for the reader to understand  
.
3. Write a short poem on any topic: (It must be your own creation, do not copy from any source)
4. Read and complete exercises of lesson 2 and 3 from your Main Course Book.
5. Learn Q/Ans and word meaning of all lessons which are completed till now.
6. You visited a historical place recently. Write your experience in the form of diary entry.
7. Write any 5 interesting news articles from the news paper.

**HOLIDAY HOMEWORK (ARTIFICIAL INTELLIGENCE)**  
**CLASS IX**

DATE: 8 MAY TO 10 MAY	Q1) DRAW COMMUNICATION PROCESS CYCLE AND EXPLAIN ITS ELEMENTS.
DATE:13MAY TO 17 MAY	Q2) MAKE A OUTLINE TO DESCRIBE VARIOUS BARRIER TO COMMUNICATION PROCESS
DATE:20 MAY TO 30 MAY	Q3) WRITE A CONVERSATION BETWEEN TWO PERSON (INTERPERSONAL COMMUNICATION) DISCUSSING ABOUT IMPORTANCE OF E-COMMERCE WEBSITES IN OUR DAY TO DAY LIFE.WRITE DIALOGUES FOR EACH ONE.
DATE:5 JUNE TO 10 JUNE	Q4) DESIGN CODES/SYMBOLS FOR A-Z AND 0-9 AND ENCODE YOUR MESSAGE (BY THE SEBDER) AND DECODE IT USING SAME CODES/SYMBOLS (BY THE RECEIVER). MESSAGE: CHOOSE YOURSELF (WITHIN 80 WORDS) [IN PRACTICAL FILE]
DATE:12 JUNE TO 15 JUNE	Q5) MAKE A CHART OF DO'S AND DON'T S OF FORMAL COMMUNICATION. [IN PRACTICAL FILE]
	NOTE: 1) USE MS-OFFICE TOOLS FOR Q3 2) USE FORMAT FOR DIALOGUES