

R. K. Memorial Sr. Sec. School
Summer Break Homework
Class- IX
English

1. Write a letter to the editor of an English daily making a plea to the common people to switch over to solar energy to conserve electricity and limit electricity bills.
2. You are Apoorva/Arpit. You bought a refrigerator from Ganesh electronics and electrical, Gandhi Marg, Nagpur. It does not function properly. Write a letter to the sales manager of the shop, complaining about the defect and asking for immediate replacement or repair as necessary.
3. Write a letter to the sales Manager MMS Books Ashok Vihar, Delhi, placing order for five titles of books that you need for educational purpose. You are Sanjeev/Sanjana, 12/CA, Model town, Kurukshetra.
4. Write the role of the given persons in your life.(write 80 words on each).
 - Our parents
 - Teachers
 - Doctors and nurses
 - Media
 - Police man
 - Workers
 - Waste collectors or garbage man
 - Our elders
5. Answer the following questions in detail.(100-120 words).

(Literature chapter 1: The fun they had; chapter 2: Sound of music moments; chapter :The lost child; chapter 2: The adventures of Toto; poem 1: The road not taken)(Extra class channel)

- (i) How would you compare a mechanical teacher to a human teacher?
 - (ii) Make a comparative study of the experiences and difficulties faced by Evelyn and Bismillah Khan in their musical journey.
 - (iii) What is the message of the poem, “The Road Not Taken”.
 - (iv) Describe the emotional turmoil experienced by the little boy.
 - (v) As Toto, make a diary entry, expressing your grief at being plucked away from your family.(Chapter 2)
6. Answer the following questions in short:
 - (i) Why did Margie hate school? Why did she think the old kind of school must have been fun?
 - (ii) Why did Bismillah Khan refuse to start a Shehnai school in the USA?

(iii) Describe the two paths at the crossroad in the forest.

(iv) Why was grandfather pleased with Toto's performance?

(v) Why the presence of Toto was kept a secret from grandmother?

7. You have watched the holy Ramayana during lockdown. You were very inspired by Ram's character. Write down what you have learnt from him. (120 - 150 words)
8. What is the role of Moral values in our life? If a person does not have moral values then his life is meaningless. How?
9. To learn all the work taught during the online classes. Learn at least 50 proverbs during the holidays.
10. Write descriptive paragraph in about 100-150 words on the following topics.
 - (i) The most frightful experience of my life
 - (ii) If I were a Millionaire!
 - (iii) Selfishness
 - (iv) Better alone than in a bad company
 - (v) The best way to serve humanity.

हिंदी

- नोट: अपने स्वास्थ्य का ध्यान रखें।
 - परियोजना कार्य - (ए-4 आकार के पेपर पर)
1. कबीर की पाँच साखियाँ याद करके लिखो।
 2. विज्ञापन लेखन-पर्यावरण के प्रति जागरूकता बढ़ाने के लिए एक विज्ञापन तैयार करें।
 - याद करने के लिए:-
 3. वाक्य(अर्थ के आधार पर), उपसर्ग-प्रत्यय, अलंकार।
 4. गद्य-खंड: पाठ-1,2,4 पद्य-खंड: 9,10,11 कृतिका: पाठ-2,3
 - अतिरिक्त कार्य अभ्यास-पुस्तिका पर:-
 5. विश्वस्तर पर फैली कोरोना महामारी के संक्रमण से बचाव पर चर्चा करते हुए पिता-पुत्री के बीच संवाद लिखिए।
 6. 'महामारी' के समय में 'समय का सदुपयोग' करने की प्रेरणा देते हुए मित्र को पत्र लिखें।
 7. 'परोपकार का महत्त्व' व 'मेरे जीवन का लक्ष्य' विषय पर अनुच्छेद लिखिए।
 8. प्रतिदिन दस नए शब्दों का श्रुतलेख अभ्यास करो।

MATHEMATICS

1. Revise Ch-1, 2, 3 and 14 in practice notebook.
2. Write Activity 1 to 5 in Lab Manual in good hand.
3. Do the given assignment.

Assignment

Chapter-1 Number System

1. Find four rational numbers between 6 and 7.
2. Find five rational numbers between $\frac{-4}{7}$ and $\frac{2}{7}$.
3. Find five rational numbers between $\frac{1}{4}$ and $\frac{1}{2}$.
4. Express the following in the form of $\frac{p}{q}$ where p and q are integers and $q \neq 0$.
(a) 0.6 (b) 0.36 (c) 0.532
5. Rationalise the denominators:
(a) $\frac{1}{\sqrt{8}}$ (b) $\frac{1}{\sqrt{5}-\sqrt{4}}$ (c) $\frac{1}{\sqrt{3}+\sqrt{2}}$ (d) $\frac{1}{\sqrt{11}-3}$
6. Find: (a) $(0.04)^{\frac{1}{2}}$ (b) i (c) $343^{\frac{-1}{3}}$
7. Simplify and express the result in simplest form: $\frac{(25)^{\frac{3}{2}}}{(16)^{\frac{3}{4}}} \times \frac{(243)^{\frac{2}{5}}}{(8)^{\frac{4}{3}}}$
8. Simplify: (a) $6^{\frac{1}{3}} \cdot 2^{\frac{1}{3}}$ (b) $\frac{9^{\frac{1}{2}}}{9^4}$ (c) $7^{\frac{3}{2}} \cdot 7^{\frac{1}{4}}$

Chapter -2 Polynomials

1. Write the coefficients of x^2 in each of the following:
(a) $x^2 + 4x + 9$ (b) $(2x + 5)(3x + 2)$ (c) $\frac{7}{3}x^2 + x$
2. Write the degree of each of the following:
(a) $11x^3 + 8x^2 + 4x$ (b) $4 - y^5$ (c) $5s - 6$ (d) $7x^7$
3. Find $p(0)$, $p(1)$ and $p(2)$ for each of the following polynomials:
(a) $p(x) = (x + 1)^2$
(b) $p(t) = t^3 - t^2 + t + 1$
4. Find the remainder when $x^4 + x^3 - 2x^2 + x + 1$ is divided by $x-1$.
5. Check whether $2t + 1$ is a factor of $4t^3 + 4t^2 - t - 1$.
6. Find the value of k if $x - 1$ is a factor of $4x^3 + 3x^2 - 4x + k$.
7. Factorise:
(a) $x^2 + 14x + 40$
(b) $9x^2 - 3x - 9$
(c) $6x^2 - x - 15$
8. Factorise:

(a) $x^3 + 6x^2 + 11x + 6$

(b) $2x^3 - 3x^2 - 3x + 2$

9. Evaluate using suitable identities:

(a) $(103)^2$

(b) 98×102

(c) $(93)^3$

(d) $(96)^2$

(e) $(204)^3$

(f) 106×107

10. Factorise using suitable identities:

(a) $25y^2 - 9x^2$

(b) $4x^2 - 36x + 81$

(c) $25x^2 + 9y^2 + 16z^2 + 30xy + 24yz + 40xz$

(d) $8a^3 - 125b^3 - 60a^2b + 150ab^2$

(e) $27x^3 + 125y^3$

11. Expand:

(a) $(3x + 2y)^2$

(b) $(2a - 4b + 5c)^2$

(c) $(4a + 7b)^3$

12. Without actually calculating the cubes, find the value of each of the following:

(a) $(-15)^3 + (7)^3 + (8)^3$

(b) $(20)^3 + (-14)^3 + (-6)^3$

Chapter-3 Coordinate Geometry

1. Write abscissa and ordinate for the following coordinates:

(a) $(-9,3)$

(b) $(-5,2)$

(c) $(0,-11)$

(d) $(-8,0)$

(e) $(\frac{2}{3}, \frac{-6}{5})$

2. In which quadrant or on which axis the following points lie?

(a) $(6,3)$

(b) $(-7,-1)$

(c) $(-4, 5)$

(d) $(8,-5)$

(e) $(0,3)$

(f) $(-6,0)$

(g) $(-6,3)$

(h) $(4,-1)$

(i) $(4, 0)$

(j) $(10,9)$

3. Plot the points on the graph by taking suitable scale on the axes:

(a) $(4,-3)$

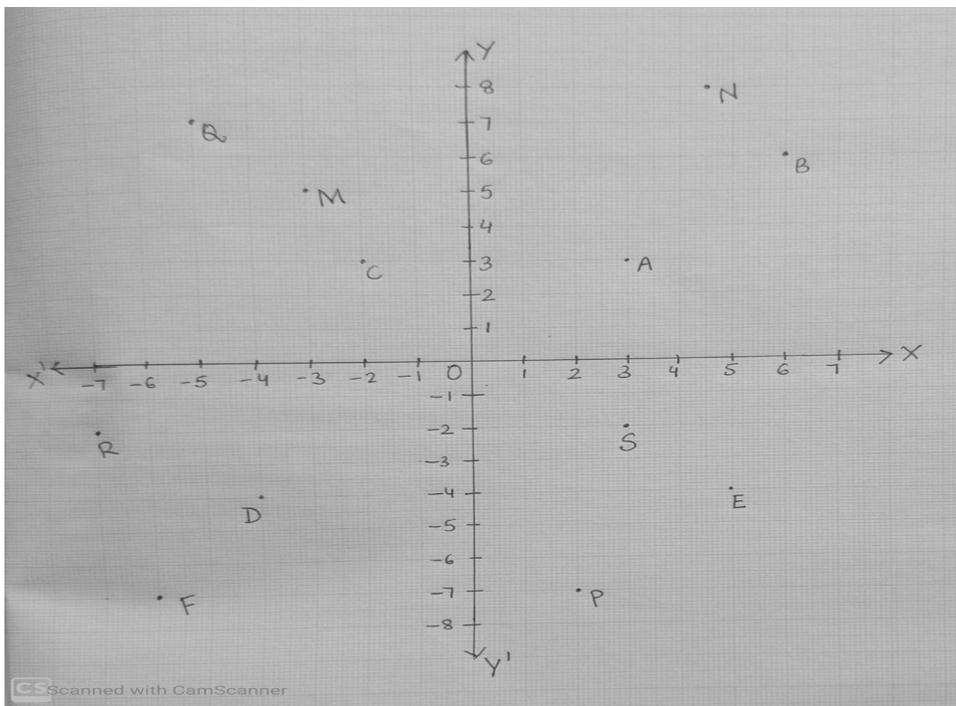
(b) $(0,5)$

(c) $(-1,7)$

(d) $(2,-5)$

(e) $(-9,-3)$

4. See the following graph and answer the following:



- (a) Write the coordinates of points A, B, C, D, P, Q, R and S.
 - (b) The point identified by coordinates (-6, -7).
 - (c) The abscissa of point M
 - (d) The ordinate of point N
 - (e) The point identified by coordinates (5, -4).
 - (f) The abscissa of point R
5. Plot the points A (4, 0), B (4, 4) and C (0, 4) on the graph. Join OA, AB, BC and CO. Name the figure so formed.
 6. What are the coordinates of origin?

Chapter-14 Statistics

1. Construct a grouped frequency distribution table with class interval 0-5, 5-10 and so on for the following marks obtained in Maths Test (out of 50) by a group of 35 students in an examination:
0, 5, 6, 7, 10, 12, 14, 15, 20, 22, 25, 26, 27, 8, 11, 17, 3, 6, 9, 17, 19, 21, 22, 29, 31, 35, 37, 40, 42, 45, 49, 4, 50, 16, 20
 - (a) What is the range of the data?
 - (b) Which class interval contains maximum number of students?
 - (c) How many students scored marks equal to 25 or greater than 25?
2. Find range, mean, mode and median of the given data:
41, 39, 46, 56, 46, 62, 54, 45, 96, 56, 98, 40, 42, 56, 60
3. Find the mean of prime numbers between 20 and 30.
4. Find the mode of the following data in each case:
 - (a) 16, 25, 16, 28, 18, 17, 18, 16, 23, 22, 14, 18
 - (b) 7, 5, 10, 13, 7, 12, 13, 7, 12, 13, 15, 13, 9
5. Find mean, mode and median of the data:
15, 14, 19, 20, 14, 15, 16, 14, 15, 18, 14, 19, 15, 17, 15, 17
6. The median of the following observations arranged in ascending order is 25, find x:
11, 13, 15, 19, $x + 2$, $x + 4$, 30, 35, 39, 46

Science

- A.** Solve the given assignment in your science H.W. notebook.
- B.** Make a newsletter having 20 science related news.
- C.** LEARN FOLLOWING CHAPTERS
 - Matter in our surroundings
 - Cell: The fundamental unit of life
 - Improvement in food resources
 - Natural resources

ASSIGNMENT

1. Fill in the blanks:
 - (a) Evaporation of a liquid at room temperature leads to _____ effect.
 - (b) At room temperature the forces of attraction between the particles of solid substances are _____ than those which exist in the gaseous state.
 - (c) The arrangement of particles is less ordered in the _____ state. However, there is no order in the _____ state.
 - (d) _____ is the change of solid state directly to vapour state without going through the _____ state.
 - (e) The phenomenon of change of a liquid into the gaseous state at any temperature below its boiling point is called _____.
2. 'Osmosis is a special kind of diffusion'. Comment.
3. Classify the following into osmosis/diffusion
 - (a) Swelling up of a raisin on keeping in water.
 - (b) Spreading of virus on sneezing.
 - (c) Earthworm dying on coming in contact with common salt.
 - (d) Shrinking of grapes kept in thick sugar syrup.
 - (e) Preserving pickles in salt.
 - (f) Spreading of smell of cake being baked throughout the house. (g) Aquatic animals using oxygen dissolved in water during respiration.
4. Water as ice has a cooling effect, whereas water as steam may cause severe burns. Explain these observations.
5. You are provided with a mixture of naphthalene and ammonium chloride by your teacher. Suggest an activity to separate them with well labelled diagram.
6. It is a hot summer day, Priyanshi and Ali are wearing cotton and nylon clothes respectively. Who do you think would be more comfortable and why?
7. Comment on the following statements: (a) Evaporation produces cooling. (b) Rate of evaporation of an aqueous solution decreases with increase in humidity. (c) Sponge though compressible is a solid.
8. Why are lysosomes known as 'suicide-bags' of a cell?
9. Do you agree that —A cell is a building unit of an organism. If yes, explain why?
10. Why does the skin of your finger shrink when you wash clothes for a long time?
11. Why is endocytosis found in animals only?
12. A person takes concentrated solution of salt, after sometime, he starts vomiting. What is the phenomenon responsible for such situation? Explain.
13. Name any cell organelle which is non membranous.
14. How does amoeba obtain its food?
15. Name the two organelles in a plant cell that contain their own genetic material and ribosomes.
16. Which cell organelle controls most of the activities of the cell?
17. Draw Nitrogen cycle and carbon cycle .
18. Write a note on bee keeping and cattle farming.
19. Differentiate between Marine fishery, inland Fishery and Aqua fishery.
20. Write a note on composite fish culture.

Social Science

1. Learn the syllabus covered till the month of May and find out 20 questions from the mid of the chapters.
2. Do map practice of Indian states, UT's along with their capital.
3. Prepare a project on disaster management to enhance the knowledge about different natural and man made disasters their consequences and management (add facts and figures also).
4. Make a collage showing various national parks, wildlife sanctuaries, bio reserves (can add newspaper clipping also).

OR

A poster showing the physical features of India.

Computer Science

1. Write about the types of Network.
 2. Draw the MS Word interface to show page header, page footer, text area, menu tab, ribbon and different layouts buttons.
 3. Search information about the following topics and write in Notebook
 - Chatting Etiquettes
 - E-Shopping
 - Blog
 - Instant Messaging (write some instant messaging software names also)
 4. Research deeply and make a presentation about “How corona virus (COVID-19) transmits from human to human”.
 5. Write and learn about e-mail that how an e-mail works.
- Note: Do all this work in holiday homework notebook