

## SUMMER HOLIDAY HOMEWORK

### GRADE IX

1. Write the character sketch of the following:
  - a. Bismillah Khan
  - b. Evelyn Glennie
  - c. Margie
2. Write an article for the school magazine on 'Climate change'. Use the ideas and hints given below

Human activities – burning fossil fuels- release carbon dioxide-rise in earth's temperature- causes sea level changes- adversely affected precipitation- seasons – flora and fauna

3. Make an innovative project on figures of speech- give description and examples.
4. Write an essay on – "Role and scope of co-curricular activities in a student's life." Mention how these activities help in the mental growth of a child and assist him/her to grow up as a complete individual.

Summer Vacation Holiday Homework.

- 1) Prepare the question-answers of the exercises of the chapters completed till now. If you have any difficulty with any question, you can ask your science teacher of your school during vacation.
- 2) Activity: Prepare a chart of the various nutritious food consumed by you during vacation. Mention each date and one food item for each of the nutrient you have consumed. The final date should be the last date of the holiday. Fill it up on a daily basis. If needed use more than one A4 sized paper. Decorate them properly. The format is hereby Shown.

Date	Carbohydrate	Protein	Fat
15th May, 2022	Rice	Egg	Milk
16th May, 2022			
17th May, 2022			
18th May, 2022			
19th May, 2022			
20th May, 2022			

1. निम्नलिखित में से किसी एक विषय पर 250 शब्दों में निबंध लिखें।

इंटरनेट की दुनिया

अशिक्षा के दुष्परिणाम

2. प्रत्यय को जोड़कर नए शब्द बनाएं।

मूल शब्द	+	प्रत्यय	=
समाज	+	इक	=
जीव	+	इक	=
रसायन	+	इक	=
परिश्रम	+	इक	=
अंतर	+	इक	=
पुराण	+	इक	=
प्रकृति	+	इक	=
अर्थ	+	इक	=
सर्वजन	+	इक	=
अध्यात्म	+	इक	=
स्वभाव	+	इक	=
इतिहास	+	इक	=
प्रारंभ	+	इक	=

3. उपसर्ग जोड़कर नए शब्द बनाएं।

उपसर्ग		मूलशब्द
वि	+	राट
अ	+	संख्य
प्र	+	सिद्ध
सम्	+	अर्पित
आ	+	कर्षित
उप	+	करण
प्र	+	काशित
अति	+	अंत
परि	+	णाम

4. A4 साइज पेपर का प्रयोग करते हुए नीचे दिए गए विषयों पर लिखें।

क्या होता है यदि

पुस्तक नहीं होते

बिजली नहीं होता

Holiday **MATHEMATICS ASSIGNMENT-2**  
**CHAPTER – 2**  
**POLYNOMIALS**

**SECTION-A**

1. Write the degree of the given polynomials :

i)  $(2x + 4)^3$

ii)  $(t^3 + 4)(t^3 + 9)$

2. Write the coefficient of  $x^4$  and  $x$  in  $4x^3 - 5x^4 + 2x^2 + 3$ .

3. Find the zeroes of  $f(z) = z^2 - 2z$ .

4. Find the product using suitable identities:  $(4 + 5x)(4 - 5x)$ .

5. What is the value of  $k$  in polynomial  $x^2 + 8x + k$ , if  $-1$  is a zero of the polynomial?

**SECTION-B**

6. Show that  $x + 1$  and  $2x - 3$  are factors of  $2x^3 - 9x^2 + x + 12$ .

7. If  $a^2 + b^2 + c^2 = 20$  and  $a + b + c = 0$ , find  $ab + bc + ca$ .

8. If  $9x^2 + 25y^2 = 181$  and  $xy = -6$ , find the value of  $3x + 5y$ .

9. Evaluate using identities:

i)  $\frac{7.83 \times 7.83 - 1.17 \times 1.17}{6.66}$

ii)  $29^3 - 11^3$

10. Simplify:  $(x^2 + y^2 - z^2)^2 - (x^2 - y^2 + z^2)^2$

**SECTION-C**

11. Evaluate using identities:

i)  $(0.99)^2$

ii)  $117 \times 83$

iii)  $(a^2b - b^2a)^2$

12. Simplify :

$$\frac{(a^2 - b^2)^3 + (b^2 - c^2)^3 + (c^2 - a^2)^3}{(a - b)^3 + (b - c)^3 + (c - a)^3}$$

13. Let  $P$  and  $Q$  be the remainders when the polynomials  $x^3 + 2x^2 - 5ax - 7$  and  $x^3 + ax^2 - 12x + 6$  are divided by  $x + 1$  and  $x - 2$  respectively. If  $2P + Q = 6$ , find the value of  $a$ .

14. If  $f(x) = 5x^2 - 4x + 5$ , find  $f(1) + f(-1) + f(0)$ .

15. By remainder theorem, find the remainder when  $p(y)$  is divided by  $g(y)$

i)  $p(y) = 4y^3 - 12y^2 + 5y - 4$  and  $g(y) = 2y - 1$

ii)  $p(y) = y^3 - 4y^2 - 2y + 6$  and  $g(y) = 1 - \frac{3}{4}y$ .

**SECTION-D**

16. Factorise:

i)  $2x^2 - \frac{5}{6}x + \frac{1}{12}$

ii)  $a^3 - 0.216$

iii)  $a^3 - \frac{1}{a^3} - 2a + \frac{2}{a}$

iv)  $x^3 - 12x(x - 4) - 64$

17. Factorise each of the following polynomials:

i)  $x^3 + 13x^2 + 31x - 45$  given that  $x + 9$  is a factor.

ii)  $4x^3 + 20x^2 + 33x + 18$  given that  $2x + 3$  is a factor.

18. Let  $R_1$  &  $R_2$  are the remainders when the polynomials  $f(x) = 4x^3 + 3x^2 - 12ax - 5$  and  $g(x) = 2x^3 + ax^2 - 6x - 2$  are divided by  $(x-1)$  and  $(x-2)$  respectively.

If  $3R_1 + R_2 - 28 = 0$ , find the value of  $a$ .

19. If  $2x + 3y = 12$  and  $xy = 6$ , find the value of  $8x^3 + 27y^3$ .

20. i) Simplify:  $\frac{1}{1+x^{b-a}+x^{c-a}} + \frac{1}{1+x^{a-b}+x^{c-b}} + \frac{1}{1+x^{a-c}+x^{b-c}}$

ii) Factorise: a)  $25x^2 + 16y^2 + 4z^2 - 40xy + 16yz - 20xz$ .

b)  $2\sqrt{2}a^3 + 8b^3 - 27c^3 + 18\sqrt{2}abc$ .

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**Delhi Public School Hajipur**

## **Summer Holiday Assignment**



**Grade :- IX**

**Sub :- Ssc**

**1. Write a critical note on the current situation of the country how COVID-19 has changed the public policies and democratic system of government.**

**2. The French revolution saw the rise of Newspaper describing the events of each day and week –**


**Collect the pictures and information on any one event and write the newspaper article.**

**You could also conduct an imaginary interview with important personage like F.A Voltaire, J.J Rousseau, Charles Montesquieu and their statements.**

**Guidelines- The students themselves do these activities take help from their parents. They can also make use of newspaper, magazines, and internet. A separate file have to be prepared.**

**3. All of you are aware that early earth was a single land mass continent called PANGEA. If you closely observe the**





various continents it is quite predominant that they intercity into each other. Activity involves taking a A0 size chart.

Make a world map cut different countries and try to fit in a single land mass. Go through Google and youtube to learn more and write up to 200 words regarding PANGEA and its disintegration to present land masses of the world.

