D.A.V. PUBLIC SCHOOL
ASHOK VIHAR, PH- IV, DELHI
HOLIDAY H.W.
CLASS - IX
SESSION – 2019-20

SUBJECT –ENGLISH

Make a flash card of any word for pictionary.
Make a game to be played in class related to grammar / reading/ writing/literature.
Read everyday for atleast 10 mnts everyday.

SUBJECT –HINDI

<u>ग्रीष्मवकाश कार्य</u>

<u>अभ्यास प्रपत्र</u> पृष्ठ 34,35,36,37 (पुस्तक मे)

पृष्ठ 42 सवांद लेखन प्रश्न 1

पृष्ठ 43 अनुच्छेद लेखन प्रश्न 1 (कॉपी मे)

अनौपचारिक पत्र प्रश्न 2 (कॉपी मे)

विषय संवर्धन गतिविधियाँ (subject enrichment activities) :-
संभवित विषय

- समाज में पोशाक का महत्त
- अतिथि देवो भव
- बिन पानी सब सून ।
- पशु : हमारे मित्र

उपरोक्त विषयो पर दो मिनट का भाषण तैयार कीजिए|

अब तक करवाए गए सभी पाठो के प्रश्नोतर याद करें।

SUBJECT –MATHS

ASSIGNMENT OF POLYNOMIALS

Mathematics Holiday Home Work.
Polynomials.

CLASS: IX

Part-A

1. Write the coefficient of y^3 in $5y^3 + 2y^2 - y + 5$

2. Find the coefficient of x^2 in $(x^2 - 1)(x - 2)$

3. If $(x - 2)$ is one of the factor of $3x - 2a$, then find the value of a.

4. Find the degree of polynomial $\dfrac{x^3 + 3x - 1}{5} - \dfrac{5}{2}x^2 - x^5$

5. If $p(x) = x^3 - 3x^2 + 2x - 3$ find the value of $p(1) + p(-1)$.

6. Find zeros of the polynomial $z^2 - 8$

7. Dividend = Divisor × Quotient + _____.

8. Give an example of Trinomial of degree 3.

9. Give one example of each monomial, binomial and quadratic polynomial.

10. Check whether $x = 3$ is a zero of polynomial $x^2 - 3x + x - 3$.

11. Write the degree of the polynomial $\sqrt{7}$

17. Find the zeroes of the polynomial $p(x) = x(x - 2)(x + 3)$

18. Find the quotient when $3x^2 - 7x - 6$ is divided by $(x - 3)$

19. Factorise $8x^3 + \sqrt{27}\, y^3$.

20. If $p(x) = x + 9$, then find $p(x) + p(-x)$.

21. Find the product without multiplying directly
    106×94

22. IF $36x^2 - b = \left(6x + \dfrac{1}{5}\right)\left(6x - \dfrac{1}{5}\right)$ then find the value of b.

23. Expand using suitable identity $(2x - 3y + z)^2$

24. Find the value of $(351)^2 - (350)^2$.

Part - C

25. Factorise : $64a^2 + 96ab + 36b^2$

26. Factorise : $x^3 + 6x^2 + 11x + 6$

27. If $x^2 + y^2 = 49$ and $x - y = 3$, then find the value of $x^3 - y^3$.

28. Simplify : $(5a - 2b)(25a^2 + 10ab + 4b^2) - (2a + 5b)(4a^2 - 10ab + 25b^2)$

29. Find the sum of remainders when $x^3 - 3x^2 + 4x - 4$ is divided by $(x - 1)$ and $(x + 2)$.

30. Find the product $\left(p - \dfrac{1}{p}\right)\left(p + \dfrac{1}{p}\right)\left(p^2 + \dfrac{1}{p^2}\right)\left(p^4 + \dfrac{1}{p^4}\right)$

31. Factorise : $7\sqrt{2}\, k^2 - 10k - 4\sqrt{2}$.

32. Simplify : $(3x - 4y)^3 - (3x + 4y)^3$

33. Expand : $\left(\dfrac{1}{2}x - \dfrac{1}{4}y + 2\right)^2$ using suitable identity.

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

44. If $a + b + c = 0$, find the value of
    $$\dfrac{(b+c)^2}{bc} + \dfrac{(c+a)^2}{ca} + \dfrac{(a+b)^2}{ab}$$

45. Simplify :
    $$\dfrac{(a^2 - b^2)^3 + (b^2 - c^2)^3 + (c^2 - a^2)^3}{(a-b)^3 + (b-c)^3 + (c-a)^3}$$

46. Factorise :
    $(2a - b - c)^3 + (2b - c - a)^3 + (2c - a - b)^3$

47. If the polynomial $4x^3 - 16x^2 + ax + 7$ is exactly divisible by $x - 1$, then find the value of a. Hence factorise the polynomial.

CHAPTER-2
POLYNOMIALS
ANSWERS

1. 5
2. -2
3. $a = 3$
4. 5
5. -12
6. $+\sqrt{8}, -\sqrt{8}$
7. Remainder
8. $x^3 - 3x^2 + 2$ or any other example
9. $2x, 2x^2 + 3, x^2 + 2x - 3$ or any other examples
10. Yes
11. Degree = 0
12. $k = 2$
13. $(2x - 1)^2$
14. No.
15. Hint put $x = 5$
16. 991026973
17. $0, 2, -3$
18. $3x + 2$
19. $(2x + \sqrt{3}y)(4x^2 - 2\sqrt{3}xy + 3y^2)$
20. 18
21. Hint $(100 + 6)(100 - 6)$
22. $\dfrac{1}{25}$
23. $4x^2 + 9y^2 + z^2 - 12xy - 6yz + 4xz$
24. 701
25. $(8a + 6b)^2$
26. $(x + 1)(x + 2)(x + 3)$
27. 207
28. $117a^3 - 133b^3$
29. -34
30. $p^8 - \dfrac{1}{p^8}$
31. $(k - \sqrt{2})(7\sqrt{2}k + 4)$
32. $-8y(16y^2 + 27x^2)$ or $-128y^3 - 216x^2y$
33. $\dfrac{x^2}{4} + \dfrac{y^2}{16} + 4 - \dfrac{1}{4}xy - y + 2x$
34. $4xy + 4zx$
35. $(5x + 2y + z)(25x^2 + 4y^2 + z^2 - 10xy - 2yz - 5zx)$
36. $a = 0, b = 2$
37. Yes
38. $k = \dfrac{4}{3}, x(x - 1)(x^2 + x + 1)$
40. (i) -210; (ii) 2, $(x + 3), (2x + 1)$

Part - D

35. Factorise : $125x^3 + 8y^3 + z^3 - 30xyz$.

36. $x + 2$ is a factor of polynomial $ax^3 + bx^2 + x - 2$ and the remainder 4 is obtained by dividing this polynomial by $(x - 2)$. Find the value of a and b.

37. Check whether
    $p(t) = 6t^3 + 3t^2 + 3t + 18$ is a multiple of $(2t + 3)$.

38. Find the value of k if $(x + k)$ is a factor of the polynomial $x^3 + kx^2 - 2x + k + 4$ and factorise $x^4 - x$.

39. If $(x - 3)$ and $\left(x - \dfrac{1}{3}\right)$ are factors of the polynomial $px^2 + 3x + r$, show that $p = r$.

40. (i) Using Identity, find the value of $(-7)^3 + (5)^3 + (2)^3$.

    (ii) Find dimension of cube whose volume is given by expression $4x^2 + 14x + 6$

41. Give possible expression for the length and breadth of each of the following rectangles if.

    (i) Area $= (x^2 + 5\sqrt{5}x + 30)$ sq. units

    (ii) Area $= (24x^2 - 26x - 8)$ sq. unit.

42. A literacy compaign was organised by Class IX girl students under NSS. Students made $(x - 5)$ rows and $(3x - 4)$ columns for the rally.

    (a) Write the total number of students in the form of polynomial.

    (b) Which values of students are depicted here?

43. Under tree plantation programme students of Class IX planted total $(3x^2 - 4x - 4)$ trees in school.

    (i) If total number of students in the class are $(x - 2)$ then find out number of trees planted by each student. (Assuming each student planted equal number of trees).

    (ii) What values of students are exhibited here?

SUBJECT –SCIENCE

Subject Enrichment (HOLIDAYS HOMEWORK)
Chemistry:(I) Prepare a Working Model on:
1. Management of e-waste(roll no1-15)
1. Energy Conservation(rollno. 15-25)
2. Reuse of Plastic waste(rollno. 25-38)
3. Futuristic Science(rollno. 39-50)

(II)Consider a cell like your school. Each part of the cell has responsibilities that must be done and certain organelles to do them. Identify the function of the following parts of the cell then identify which person does the same job.

First one is done as an example to follow:

Eg:Part of school that has a similar function

1. Cell membrane: controls what goes in and out of the cell. **: FRONT OFFICE**
2. Mitocondria: _____
3. Nucleus: _____
4. Ribosome: _____
5. Cytoplasm: _____
6. Golibody: _____
7. Cell wall: _____

(III) practice the assignments of chapter 1,5,9

(IV) Learn the chapters for unit test

SUBJECT –S.ST.

GEOGRAPHY (9A-E)
Activity on disaster management
Divide the class into equal halves
First half students will be given natural disaster:-**floods or earthquake.**
Second half students will be given man-made disaster:-**fire and road accidents.**
Explain Its causes, after effects, mitigation strategies and map presentation in a scrap file.
ROAD SAFETY PROGRAMME
Its mandatory for all students to prepare material on road safety and bring it after vacation for display boards.

SUBJECT –SANSKRIT

(१)शब्द रूप-राजन् ,अस्मद् युष्मद् ,भवत् ,साधु का रूप लिखकर याद करना ह ।

 (२) धातु रूप--स्था, दृश्,,

दा,गम्, नम, क रूप पाच लकार म लिखकरयाद करना ह।

(३)पाच चित्र चिपका कर पाच-पाच वाक्य सस्कृत। म बनान ह।

(४) पाच पत्र लिखना ह।

SUBJECT –COMPUTER

1. Design a sway on the topic **"Cyber Safety"** and share the link at davhhw@gmail.com. Mention the class, section, roll-on and name.

2. Create a brochure on the topic "Cyber Bullying" in MS WORD (Add 3 columns , page colour , relevant images and other features of Ms Word to make it creative).

SUBJECT- ART   HOLIDAYS HOMEWORK

To make simple composition based on any two form of Folk Art-

MADHUBANI PAINTING , WARLI PAINTING ,MANDANA ART