

KENDRIYA VIDYALAYA PICKET, SECUDERABAD :09

कक्षा- दशमी

१, पाञ्च पत्र लिखकर लाये ।

२, पाञ्च चित्रो को देखकर पाञ्च - पाञ्च वाक्य बनाकर लाये ।

३. लिख धातु के अनुसार कोई पाञ्च धातु पाञ्च लकारो मे लिखकर लाये ।

Class : X Social Studies

1). Write a short note on “Democracy”.

2).Differentiate between conventional and non conventional energy

3).Write a short note on

a).Poverty b).Un-Employment c). Effects of over population growth

CLASS- X SUBJECT: SCIENCE

HOMEWORK (Notebook)

I. Describe these types of chemical reactions giving an example of each

i. Combination, ii. Decomposition, iii. Displacement, iv. Double displacement, v. Exothermic, vi. Endothermic, vii. Oxidation, viii.Reduction and ix. Redox reactions

II. List the valencies of 10 ions and the formulae of 10 chemical compounds.

ASSIGNMENT (on A4 sheets)

Explain the rusting of iron articles by pasting suitable pictures and listing 5 preventive steps.

PROJECT WORK (on A4 sheets)

Write 10 balanced chemical equations following the steps in proper order.

Assignment for summer vacation - ENGLISH– Class X

1. Read the novel and write chapter wise gist and character sketch.
2. Choose interesting articles (any 5), paste them and write your opinion for each.

ग्रीष्म अवकाशीय गृहकार्य

सत्र- 2017-18

विषय -हिन्दी

कक्षा - दसवीं

गृहकार्य की कॉपी में -

निम्नलिखित विषयों पर निबंध लिखिए -

- (1) स्वच्छता की ओर बढ़ते कदम
- (2) आतंकवाद
- (3) प्राकृतिक आपदा भूकंप
- (4) अनुशासित दिनचर्या
- (1) ओलंपिक और भारत

परियोजना कार्य(फाइल में)-

1 महान हस्ती की जानकारी ,जिसने विकलांगता को अभिशाप न

मानकर चुनौती के रूप में स्वीकारा जानकारी चित्र सहित दीजिए।

2 मदर टेरेसा,सिस्टर निवेदिता ,एनी बेसेंट जो विदेशी होते हुए भी भारत

में आकार बसे की जानकारी चित्र सहित दीजिए।

3 छह ऋतुओं से संबंधित जानकारी देते हुए किन्हीं दो ऋतुओं से

संबंधित कविताएं लिखिए ।

HOLIDAY HOME-WORK FOR CLASS-X-MATHEMATICS

NOTE: SOLVE ANY 50 PROBLEMS ON A4 SIZE PAPERS (BOTH SIDES) AND SUBMIT.

REAL NUMBERS

1. Show that the square of an odd positive integer is of the form $8m + 1$, for some whole number m .
2. Show that the square of any positive integer is either of the form $4q$ or $4q + 1$ for some integer q .
3. Show that cube of any positive integer is of the form $4m$, $4m + 1$ or $4m + 3$, for some integer m .
4. Show that the square of any positive integer cannot be of the form $5q + 2$ or $5q + 3$ for any integer q .
5. Show that the square of any positive integer cannot be of the form $6m + 2$ or $6m + 5$ for any integer m .
6. Show that the square of any odd integer is of the form $4q + 1$, for some integer q . ■
7. If n is an odd integer, then show that $n^2 - 1$ is divisible by 8.

8. Prove that if x and y are both odd positive integers, then $x^2 + y^2$ is even but not divisible by 4.
9. Show that the square of an odd positive integer can be of the form $6q + 1$ or $6q + 3$ for some integer q .
10. Show that the cube of a positive integer of the form $6q + r$, q is an integer and $r = 0, 1, 2, 3, 4, 5$ is also of the form $6m + r$.
11. Prove that one and only one out of n , $n + 2$ and $n + 4$ is divisible by 3, where n is any positive integer.
12. Prove that one of any three consecutive positive integers must be divisible by 3.
13. Show that the product of three consecutive natural numbers is divisible by 6.
14. Show that any positive odd integer is of the form $6q + 1$ or $6q + 3$ or $6q + 5$ where $q \in \mathbb{Z}$.
15. Show that any positive even integer is of the form $6q$ or $6q + 2$ or $6q + 4$ where $q \in \mathbb{Z}$.
16. If a and b are two odd positive integers such that $a > b$, then prove that one of the two numbers $\frac{a+b}{2}$ and $\frac{a-b}{2}$ is odd and the other is even.
17. Use Euclid's division lemma to show that the cube of any positive integer is of the form $9m$, $9m + 1$ or $9m + 8$.
18. Using Euclid's division algorithm to show that any positive odd integer is of the form $4q+1$ or $4q+3$, where q is some integer.
19. Using Euclid's division algorithm, find which of the following pairs of numbers are co-prime:
(i) 231, 396 (ii) 847, 2160

20. Show that 12^n cannot end with the digit 0 or 5 for any natural number n .
21. In a morning walk, three persons step off together and their steps measure 40 cm, 42 cm and 45 cm, respectively. What is the minimum distance each should walk so that each can cover the same distance in complete steps?
22. If $\text{LCM}(480, 672) = 3360$, find $\text{HCF}(480, 672)$.
23. Express 0.69 as a rational number in $\frac{p}{q}$ form.
24. Show that the number of the form $7^n, n \in \mathbb{N}$ cannot have unit digit zero.
25. Using Euclid's Division Algorithm find the HCF of 9828 and 14742.
26. Explain why $3 \times 5 \times 7 + 7$ is a composite number.
27. Can two numbers have 18 as their HCF and 380 as their LCM? Give reasons.
28. Without actual division find whether the rational number $\frac{1323}{(6^3 \times 35^2)}$ has a terminating or a non-terminating decimal.
29. Without actually performing the long division, find if $\frac{987}{10500}$ will have terminating or non-terminating (repeating) decimal expansion. Give reasons for your answer.

30. A rational number in its decimal expansion is 327.7081. What can you say about the prime factors of q , when this number is expressed in the form $\frac{p}{q}$? Give reasons.
31. A sweet seller has 420 kaju burfis and 130 badam burfis she wants to stack them in such a way that each stack has the same number, and they take up the least area of the tray. What is the number of burfis that can be placed in each stack for this purpose?
32. Find the largest number which divides 245 and 1029 leaving remainder 5 in each case.
33. Find the largest number which divides 2053 and 967 and leaves a remainder of 5 and 7 respectively.
34. Two tankers contain 850 litres and 680 litres of kerosene oil respectively. Find the maximum capacity of a container which can measure the kerosene oil of both the tankers when used an exact number of times.
35. In a morning walk, three persons step off together. Their steps measure 80 cm, 85 cm and 90 cm respectively. What is the minimum distance each should walk so that all can cover the same distance in complete steps?
36. Find the least number which when divided by 12, 16, 24 and 36 leaves a remainder 7 in each case.
37. The length, breadth and height of a room are 825 cm, 675 cm and 450 cm respectively. Find the longest tape which can measure the three dimensions of the room exactly.

38. Determine the smallest 3-digit number which is exactly divisible by 6, 8 and 12.
39. Determine the greatest 3-digit number exactly divisible by 8, 10 and 12.
40. The traffic lights at three different road crossings change after every 48 seconds, 72 seconds and 108 seconds respectively. If they change simultaneously at 7 a.m., at what time will they change simultaneously again?
41. Three tankers contain 403 litres, 434 litres and 465 litres of diesel respectively. Find the maximum capacity of a container that can measure the diesel of the three containers exact number of times.
42. Find the least number which when divided by 6, 15 and 18 leave remainder 5 in each case.
43. Find the smallest 4-digit number which is divisible by 18, 24 and 32.
44. Remu purchases two bags of fertiliser of weights 75 kg and 69 kg. Find the maximum value of weight which can measure the weight of the fertiliser exact number of times.
45. In a seminar, the number, the number of participants in Hindi, English and Mathematics are 60, 84 and 108, respectively. Find the minimum number of rooms required if in each room the same number of participants are to be seated and all of them being in the same subject.
46. 144 cartons of Coke cans and 90 cartons of Pepsi cans are to be stacked in a canteen. If each stack is of the same height and is to contain cartons of the same drink, what would be the greatest number of cartons each stack would have?

47. A merchant has 120 litres of oil of one kind, 180 litres of another kind and 240 litres of third kind. He wants to sell the oil by filling the three kinds of oil in tins of equal capacity. What would be the greatest capacity of such a tin?
48. Express each of the following positive integers as the product of its prime factors: (i) 3825 (ii) 5005 (iii) 7429
49. Express each of the following positive integers as the product of its prime factors: (i) 140 (ii) 156 (iii) 234
50. There is circular path around a sports field. Priya takes 18 minutes to drive one round of the field, while Ravish takes 12 minutes for the same. Suppose they both start at the same point and at the same time and go in the same direction. After how many minutes will they meet again at the starting point?
51. In a morning walk, three persons step off together and their steps measure 80 cm, 85 cm and 90 cm, respectively. What is the minimum distance each should walk so that each can cover the same distance in complete steps?
52. State Euclid's Division Lemma.
53. State the Fundamental theorem of Arithmetic.
54. Given that $\text{HCF}(306, 657) = 9$, find the $\text{LCM}(306, 657)$.
55. Why the number 4^n , where n is a natural number, cannot end with 0?
56. Why is $5 \times 7 \times 11 + 7$ is a composite number?

57. Explain why $7 \times 11 + 13 + 13$ and $7 \times 6 \times 5 \times 4 \times 3 \times 2 \times 1 + 5$ are composite numbers.
58. In a school there are two sections – section A and section B of class X. There are 32 students in section A and 36 students in section B. Determine the minimum number of books required for their class library so that they can be distributed equally among students of section A or section B.
59. Three sets of English, Hindi and Mathematics books have to be stacked in such a way that all the books are stored topic wise and the height of each stack is the same. The number of English books is 96, the number of Hindi books is 240 and the number of Mathematics books is 336. Assuming that the books are of the same thickness, determine the number of stacks of English, Hindi and Mathematics books.
60. Using Euclid's division algorithm, find the HCF of 2160 and 3520.
61. Find the HCF and LCM of 144, 180 and 192 by using prime factorization method.
62. Find the HCF and LCM of 17, 23 and 37 by using prime factorization method.
63. If $\text{HCF}(6, a) = 2$ and $\text{LCM}(6, a) = 60$ then find the value of a.
64. Find two rational number and two irrational number between $\sqrt{2}$ and $\sqrt{3}$.
65. Prove that $5 - 2\sqrt{3}$ is an irrational number.
66. Prove that $15 + 17\sqrt{3}$ is an irrational number.

67. Prove that $\frac{2\sqrt{3}}{5}$ is an irrational number.

68. Prove that $7+3\sqrt{2}$ is an irrational number.

69. Prove that $2+3\sqrt{5}$ is an irrational number.

70. Prove that $\sqrt{2}+\sqrt{3}$ is an irrational number.

71. Prove that $\sqrt{3}+\sqrt{5}$ is an irrational number.

72. Prove that $7-2\sqrt{3}$ is an irrational number.

73. Prove that $3-\sqrt{5}$ is an irrational number.

74. Prove that $\sqrt{2}$ is an irrational number.

75. Prove that $7-\sqrt{5}$ is an irrational number

