Holidays Home work

Class 10th

Subject –Maths

- **Do all MCQ questions with solution**

Chapter -1

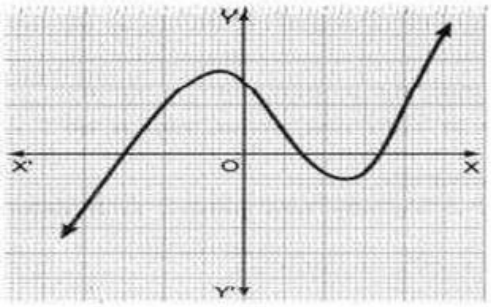
S.No.	QUESTIONS
1	The prime factorisation of natural number 288 is: (a) $2^5 \times 3^2$ (b) $2^4 \times 3^2$ (c) $2^5 \times 3^5$ (d) $2^5 \times 3^3$
2	If the HCF of 360 and 64 is 8,then their LCM is: (a)2880 (b)2530 (c)672 (d)2780
3	If two positive integers A and B can be expressed as $A = xy^3$ and $B = x^4y^2z$; x, y being prime numbers then HCF (A, B) is : (a) x^4y^3 (b) x^4y^2z (c) xy^2z (d) xy^2
4	The LCM of two numbers is 1200. Which of the following cannot be their HCF? (a)600 (b)500 (c)400 (d)200
5	If HCF (26, 169) = 13, then LCM (26, 169) = ? (a)26 (b)52 (c)338 (d)13
6	An army contingent of 616 members is to march behind an army band of 32 members in a parade. The two groups are to march in the same number of columns. What is the maximum number of columns in which they can march? (a)5 (b)6 (c)7 (d)8

7	The HCF and LCM of 12, 21, 15 respectively are : (a)3,420 (b)3,515 (c)4,420 (d)4,525
8	The ratio of LCM and HCF of the least composite number and the least prime number is : (a)3:2 (b)2:7 (c)2:1 (d)1:2
9	If LCM (x, 18) = 36 and HCF (x, 18) = 2, then x = (a)2 (b)3 (c)4 (d)6
10	If $(a \times 5)^n$ ends with the digit zero for every natural number n, then a is (a)a prime number (b)an even number (c)an odd number (d)none of these
11	There are 312, 260 and 156 students in class X, XI and XII respectively. Buses are to be hired to take these students to a picnic. Find the maximum number of students who can sit in a bus if each bus takes equal number of students: (a) 34 (b)52 (c)48 (d)63
12	Three bells ring at intervals of 4, 7 and 14 minutes. All the three rang at 7 AM. When will they ring together again? (a)7:28 AM (b)7:54 AM (c)7:32AM (d)7:40AM

13	The product of a non-zero rational number and an irrational number is (a)always rational (b)always irrational (c)rational or irrational (d)always one
14	The smallest irrational number by which $\sqrt{18}$ should be multiplied so as to get a rational number is (a) $\sqrt{3}$ (b) 2 (c) $\sqrt{2}$ (d) $\sqrt{18}$
15	If two positive integers a and b are written as $a = p^3q^2$ and $b = pq^3$; p, q are prime numbers, then HCF (a, b) is: (a) pq^2 (b)pq (c) p^3q^3 (d) p^2q^2
16	On 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? (a)2540 (b)2560 (c)2650 (d)2520
17	Three farmers have 490 kg, 588 kg and 882 kg of wheat respectively. Find the maximum capacity of a bag so that the wheat can be packed in exact number of bags (a)98 (b)290 (c)350 (d)450

18	6×5×4×3×2×1+5 is an example of : (a)prime number (b)composite number (c)irrational number (d)none of the above
19	L.C.M of two numbers is 60 times of their H.C.F. Sum of H.C.F and L.C.M is 366. If one number is 72, then find the other number. (a)60 (b)20 (c)30 (d)120
20	Two numbers are in the ratio 15:11 their HCF is 13 and LCM is 2145 then find the number. (a)205,132 (b)175,305 (c)195,143 (d)230,155

Chapter-2

1	Which of the following is not a polynomial? (a)$\sqrt{3}\,x^3 - 2x - \sqrt{3}$ (b) $x + \frac{1}{x}$ (c) $7x^2 + 5x - \sqrt{2}$ (d) 5
2	Which are the zeroes of $p(x) = 6x^2 - 7x - 3$ (a) 5, –2 (b) –5, 2 (c) –5, –2 (d) none of these
3	The number of zeroes of the polynomial from the graph is (a) 0 (b) 1 (c) 2 (d) 3 
4	Find the quadratic polynomial whose zeros are -3 and 4. (a) $x^2 - 7x - 12$ (b) $x^2 + x + 12$ (c)$x^2 - x - 12$. (d) $x^2 + 3x - 4$
5	Which are the zeroes of $p(x) = x^2 - 8x + 15$ (a) 5, –2 (b) –5, 2 (c) 5,3 (d) none of these

6	Find the sum and product of the zeroes of polynomial x^2 -3x+5 (a) -3,5 (b) 2,5 (c) 3,5 (d) -3,2
7	If one of the zeroes of quadratic polynomial (k +3)x^2+ 2kx + 6 is -3 ,then find value of k. (a) 10 (b) -11 (c) 11 (d) 13
8	A quadratic polynomial whose sum and product of zeroes are –5 and 6 is (a) $x^2 – 5x – 6$ (b) $x^2 + 5x – 6$ (c) x^2+ 5x + 6 (d) none of the above.
9	If the product of the zeroes of the quadratic polynomial 3 x^2 + 5x +k is $-\frac{2}{3}$, then the value of k is (a) -3 (b) -2 (c) 2 (d) 3
10	If one zero of the polynomial $6x^2$ + 37x - (k - 2) is reciprocal of the other, then, what is the value of k? (a) 4 (b) -6 (c) 6 (d) -4

11	The zeroes of the polynomial $p(x) = x^2 + 4x + 3$ are given by (a) 1,3 (b) -1,3 (c) 1, -3 (d) -1, -3
12	If α and β are the zeroes of the polynomial $f(x) = px^2 - 2x + 3p$ and $\alpha + \beta = \alpha\beta$ then the value of p (a) $-\frac{2}{3}$ (b) $\frac{2}{3}$ (c) $\frac{1}{3}$ (d) $-\frac{1}{3}$
13	The zeroes of the quadratic polynomial $f(x) = x^2 + 99x + 127$ are (a) both negative (b) both positive (c) both equal (d) none
14	The maximum number of zeroes a cubic polynomial can have, is (a) 1 (b) 4 (c) 2 (d) 3
15	If α and β are the zeroes of the polynomial $f(x) = x^2 - ax – b$, then the value of $\alpha^2 + \beta^2$ is (a) $a^2 – 2b$ (b) $a^2 + 2b$ (c) $a^2 – b$ (d) $a^2 + b$
16	The number of polynomials having zeroes -3 and 5 is (a) 1 (b) 2 (c) 3 (d) more than 3
17	If x+ 2 is factor of x^2 + ax + 2b and a + b = 4, then (a) a = 1, b = 3 (b) a = 3, b = 1 (c) a = -1, b = 5 (d) a = 5, b = -1

18	If α and β are the zeroes of the polynomial $f(x) = 4x^2 - 3x - 7$, then the value of $\frac{1}{\alpha} + \frac{1}{\beta}$ is (a) $\frac{7}{3}$ (b) $-\frac{7}{3}$ (c) $\frac{3}{7}$ (d) $-\frac{3}{7}$
19	If α and β are the zeroes of the polynomial $f(x) = x^2 - ax - b$, then the value of $\alpha^2 + \beta^2$ (a) $a^2 - 2b$ (b) $a^2 + 2b$ (c) $b^2 - 2a$ (d) $b^2 + 2a$
20	A quadratic polynomial, the sum of whose zeroes is - 5 and their product is 6, is (a) $x^2 + 5x + 6$ (b) $x^2 - 5x + 6$ (c) $x^2 - 5x - 6$ (d) $-x^2 + 5x + 6$

Chapter-3

Q1.	The value of K for which the system of equation $kx - y = 2$, and $6x - 2y = 3$ has a unique solution is.		
(A)	Not equal to 3	(B)	Not equal to (-3)
(C)	Not equal to 0	(D)	Not equal to (1)
Q2.	If the system of equations $kx - 5y = 2$ and $4x + my = 10$ has infinitely many solution then the value of k and m are.		
(A)	$k = \frac{4}{5}$ and m = - 25	(B)	$k = \frac{5}{4}$ and m = -25
(C)	$k = \frac{5}{4}$ and m = 25	(D)	$k = \frac{-5}{4}$ and m = 25
Q3.	8 chairs and 5 tables cost Rs 10,500, while 5 chairs and 3 tables cost Rs 6,450. The cost of each chair will be.		
(A)	750	(B)	600
(C)	850	(D)	900
Q4.	The pair of linear equation $3x + 5y = 3$ and $6x + ky = 8$ do not have a solution, if k is		
(A)	5	(B)	10
(C)	15	(D)	20

Q5.	The pair of equation $x = a$ and $y = b$ graphically represents the lines which are.		
(A)	Parallel lines	(B)	Intersecting at (a, b)
(C)	Coincident lines	(D)	Intersecting at (b, a)
Q6.	The value of c for which the pair of equation $cx - y = 2$ and $6x - 2y = 3$ will have no solution.		
(A)	3	(B)	-3
(C)	-12	(D)	No value
Q7.	The pair of equation $5x - 15y = 8$ and $3x - 9y = \frac{24}{3}$ has.		
(A)	Infinite solution	(B)	Unique solution
(C)	No solution	(D)	Two solution
Q8.	$19x - 17y = 55$ and $17x - 19y = 53$ then the value of $(x - y)$ is.		
(A)	$\frac{1}{3}$	(B)	-3
(C)	3	(D)	5

Mk

Q9.	If $bx + ay = a^2 + b^2$ and $ax - by = 0$, then the value of $(x - y)$.		
(A)	a - b	(B)	b – a
(C)	$a^2 - b^2$	(D)	$b^2 + a^2$
Q10.	If $2x + 3y = 0$ and $4x - 3y = 0$ then the value of $(x + y)$ is .		
(A)	0	(B)	-1
(C)	1	(D)	2
Q11.	If (6, k) is a solution of equation $3x + y - 22 = 0$ then the value of k is.		
(A)	4	(B)	- 4
(C)	3	(D)	- 3
Q12.	The father's age is six times his son's age. Four years hence, the age of the father will be four times his son's age. The present ages, in years, of the son and the father are, respectively.		
(A)	4 and 24	(B)	5 and 30
(C)	6 and 36	(D)	3 and 24
Q13.	Aruna has only Re 1 and Rs 2 coins with her. If the total number of coins that she has is 50 and the amount of money with her is Rs 75, then the number of Re 1 and Rs 2 coins are, respectively.		

(A)	35 and 15	(B)	35 and 20
(C)	15 and 35	(D)	25 and 25
Q14.	The sum of the digits of a two digit number is 9. If 27 is added to it, the digits of the numbers get reversed. The number is.		
(A)	36	(B)	72
(C)	63	(D)	25
Q15.	If $x = a$, $y = b$ is the solution of the equations $x - y = 2$ and $x + y = 4$, then the values of a and b are, respectively.		
(A)	3 and 5	(B)	5 and 3
(C)	3 and 1	(D)	-1 and -3
Q16.	The value of k for which the system of equations $x + 2y = 3$ and $5x + ky + 7 = 0$ has no solution is.		
(A)	10	(B)	6
(C)	3	(D)	1
Q17.	Sum of two numbers is 35 and their difference is 13, then the numbers are.		
(A)	24 and 12	(B)	24 and 11
(C)	12 and 11	(D)	None of these

Q18.	A two-digit number is 4 more than 6 times the sum of its digits. If 18 is subtracted from the number, the digits are reversed, then the number is.		
(A)	36	(B)	46
(C)	64	(D)	None of these
Q19.	Seven times a two-digit number is equal to four times the number obtained by reversing the order of its digit. If the difference between the digits is 3, then the number is.		
(A)	36	(B)	33
(C)	66	(D)	None of these
Q20.	Five years ago, A was thrice as old as B and ten years later A shall be twice as old as B, then the present age of A is.		
(A)	20	(B)	50
(C)	30	(D)	None of these

- **Art integrated project(Geographical diversity and agriculture of Manipur and Haryana)**
- **Activity:**

1.To find the HCF of two numbers experimentally

2.To find the zeros of polynomial by the graphical method

3.To verify the condition for the consistency of a system of linear equation in two variable