DEWAN PUBLIC SCHOOL INTERNATIONAL

Class -X

Periodic test -1

(2025-26)

Subject- Mathematics

Maximum Time - 1 hour Maximum Marks -40

Instructions

- This question paper has 3 sections.
- Section A carries 10 Multiple choice questions of 1 marks each.
- Section B carries 4 very short questions of 2 marks each.
- Section C carries 3 short questions of 4 marks each.
- Section D carries 1 case based study of 5 marks.
- Section E carries 1 Long question of 5 marks.
- All questions are compulsory , internal choice has given.

SECTION- A

Q-1 Zeroes of $p(x)= X^2 - 27$ are

(a) +_9_/3 (b)+_ 7_/3

(b) +_3_/3 (d) none of these

Q-2 If 3x+2ky-2=0 and 2x+5y+1 are parallel , then the value of k

(a)4/5 (b) 4/15

(c) 15/4 (d) 5/4

Q-3 If p be the prime number The sum of its factors is

(a) P (b)-1

(C) P+1 (d) p-1

Q-4 If p1ans p2 are odd prime numbers such thatp1>p2 then $p1^2-p2^2$ is

(a) An even number. (b) an odd number

(C) an odd prime number (d) a prime number

Q-5 If $a=2^2\times3\text{^}x$, $b= 2^2\times3\times5$, $c= 2^2\times3\times7$, and LCM(a,b,c)=3780, then value of x will be

(a) 0

(b) 2

(c) 3

(d) 1

Q-6 The graph of a polynomial p(x) is shown in the figure. The no of zeroes of p(x) are

(a) 3

(b) 2

(c) 1

(d) 4

Q-7The number of Polynomials having -2and 5 as its zeroes is

(a) 1
(b) 2
(c) 3
(d) Infinitely many

Q-8 For what value of k, do the equations 3x-y +8=0 and 6x-ky+16=0 represent coincident lines?

(a) ½
(b) – 1/2
(c) -2
(d) 2

Q-9 If @ and & are two roots of the quadratic equation $ax^2+bx+c=0$, then $ax^2+bx+c=$

(a) a(x-@)(x-&)
(b) a(x-@)(x+&)
(c) a(x+@)(x+&)
(d) b(x-@)(x-&)

Q-10 If the sum and product of the roots of the equation $kx^2+6x+4k=0$, then the value of k is

(a) -3/2
(b) 3/2
(c) 2/3
(d) -2/3

SECTION -B

Q-11 Find the zeroes of the quadratic polynomial $\sqrt{3}\,x^2 - 8x + 4\sqrt{3}$.

Q-12 Find the largest number that divides 70 and 125 leaving the remainder 5 and 8 respectively.

Q-13 Solve for x. 16/x -1=15/x+1

Q-14 Prove that _/ 5 is an irrational number

SECTION -C

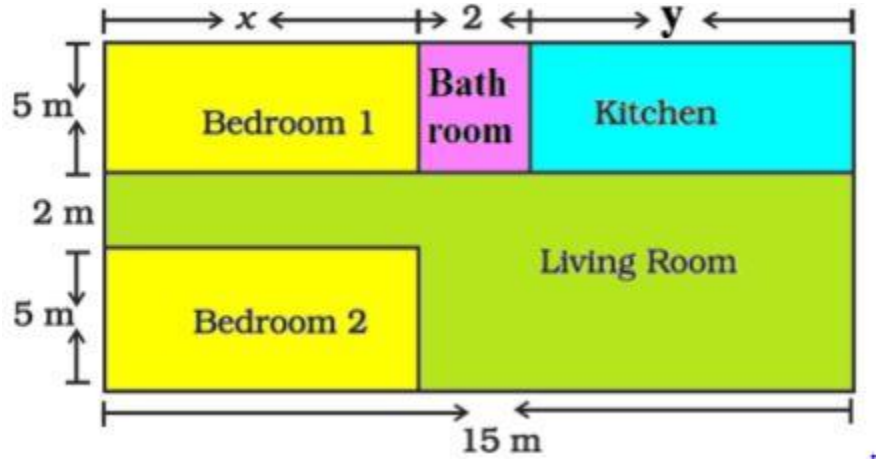
Q-15 Solve 1/3x+y +1/3x-y =3/4
½(3x+y) -1/2(3x-y) = -1/8

Q-16 The coach of cricket team buys 7 bats and 6 balls for ₹3800 . Later , he buys 3 bats and 5 balls for ₹ 1750. Find the cost of each bat and ball.

Q- 17 If @ and $ are the zeros of the polynomial $f(x)= x^2-5x+4$, Find the value of 1/@ +1/$-2@$.

SECTION-D

Q-18 Amit is planning to buy a house and the layout is given below. The design and the measurement has been made such that areas of two bedrooms and kitchen together is 95 sq.m.



Based on the above information, answer the following questions:

1. Form the pair of linear equations in two variables from this situation.

2. Find the length of the outer boundary of the layout.

3. Find the area of each bedroom and kitchen in the layout.

4. Find the area of living room in the layout.

5. Find the cost of laying tiles in kitchen at the rate of Rs. 50 per sq.m.

SECTION – E

Q-19 In a two digit number, the digit in the unit place is twice of the digit in the tenth place. If the digits are reversed, the new number is 27 more than the given number. Find the number using graphical method.