



INDIAN SCHOOL AL WADI AL KABIR

Pre-Mid Term Practice Questions (2026-27)

Sub: MATHEMATICS (041)

Class: X

Date: 10- 05 - 2026

Section A (1 mark each)

Q.1.	The graph of a quadratic polynomial $p(x)$ passes through the points $(-6,0)$, $(0, -30)$, $(4,-20)$ and $(6,0)$. The zeroes of the polynomial are:							
	A	- 6,0	B	4, 6	C	- 30, -20	D	- 6, 6
Q.2.	If $a = 2^2 \times 3^x$, $b = 2^2 \times 3 \times 5$, $c = 2^2 \times 3 \times 7$ and $\text{LCM}(a, b, c) = 3780$, then x is equal to:							
	A	1	B	2	C	3	D	0
Q.3.	If $2024x + 2025y = 1$; $2025x + 2024y = -1$, then $x - y =$							
	A	0	B	-2	C	2	D	-1
Q.4.	The sum of two numbers is 1215 and their HCF is 81, then the possible pairs of such numbers are:							
	A	2	B	3	C	4	D	5
Q.5.	The number of polynomials having -2 and 5 as its zeroes is:							
	A	one	B	two	C	three	D	infinitely many
Q.6.	For which value (s) of p , will the lines represented by the following pair of linear equations be parallel: $3x - y - 5 = 0$; $6x - 2y - p = 0$							
	A	all real values except 10	B	10	C	$\frac{5}{2}$	D	$\frac{1}{2}$
Q.7.	If the system of equations $3x+y=1$ and $(2k-1)x+(k-1)y=2k+1$ is inconsistent, then $k =$							
	A	-1	B	0	C	1	D	2
Q.8.	The lines represented by linear equations $x = a$ and $y = b$ ($a \neq b$) are:							
	A	Intersecting at (a, b)	B	Intersecting at (b, a)	C	parallel	D	coincident

Q.9.	A quadratic polynomial having zeroes, $-\sqrt{\frac{5}{2}}$ and $\sqrt{\frac{5}{2}}$ is:							
	A	$x^2 - 5\sqrt{2}x + 1$	B	$8x^2 - 20$	C	$15x^2 - 6$	D	$x^2 - 2\sqrt{5}x - 1$
Q.10.	If two positive integers a and b are written as $a = x^3y^2$ and $b = xy^3$, where x, y are prime numbers, then the result obtained by dividing the product of the positive integers by the LCM (a, b) is:							
	A	xy	B	xy^2	C	x^3y^3	D	x^2y^2
DIRECTION: In the following question, a statement of Assertion (A) is followed by a statement of Reason (R). Choose the correct option (a) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A) (b) Both Assertion (A) and Reason (R) are true and Reason (R) is not the correct explanation of Assertion (A) (c) Assertion (A) is true but reason (R) is false. (d) Assertion (A) is false but reason (R) is true.								
Q.11.	Assertion(A): If product of two numbers is 5780 and their HCF is 17, then their LCM is 340. Reason(R) : HCF is always a factor of LCM.							
Q.12.	Assertion(A): HCF of any two consecutive even natural numbers is always 2. Reason(R): Even natural numbers are divisible by 2.							
Section B (2 marks each)								
Q.13.	Find the H.C.F and L.C.M of 480 and 720 using the Prime factorisation method.							
Q.14.	The H.C.F of 85 and 238 is expressible in the form $85m - 238$. Find the value of m.							
Q.15.	If the zeroes of the quadratic polynomial $x^2 + (a + 1)x + b$ are 2 and -3 , then find the values of a and b.							
Q.16.	Find the smallest number which is divisible by both 306 and 657.							
Q.17.	If $49x + 51y = 499$, $51x + 49y = 501$, then find the value of x and y.							

Section C (3 marks each)	
Q.18.	If α and β are zeroes of a polynomial $6x^2 - 5x + 1$ then form a quadratic polynomial whose zeroes are α^2 and β^2 .
Q.19.	National Art convention got registrations from students from all parts of the country, of which 60 are interested in music, 84 are interested in dance and 108 students are interested in handicrafts. For optimum cultural exchange, organisers wish to keep them in minimum number of groups such that each group consists of students interested in the same artform and the number of students in each group is the same. Find the number of students in each group. Find the number of groups in each art form. How many rooms are required if each group will be allotted a room?
Q.20.	The monthly income of Aryan and Babban are in the ratio 3:4 and their monthly expenditures are in ratio 5:7. If each save ₹ 15,000 per month, find their monthly incomes.
Q.21.	Solve the following system of equations graphically: $2x + y = 6$, $2x - y - 2 = 0$. Find the area of the triangle so formed by two lines and x - axis.
Q.22.	Five years hence, fathers age will be three times the age of son. Five years ago, father was seven times as old as his son. Find their present ages.
Q.23.	The sum of a two - digit number and the number obtained by reversing the digits is 66. If the digits of the number differ by 2, find the number. How many such numbers are there?
Q.24	On a particular day, 50000 people attended a Cricket Test Match between India and Australia in Sydney Cricket Ground. Let x be the number of adults attended the cricket match and y be the number of children attended the cricket match. Cost of an adult ticket was ₹1000 while cost of a child ticket was ₹200. On that day Revenue earned by selling all 50,000 tickets, was ₹4,20,00,000. Find how many adults and how many children attended the cricket match?
Q.25	Prove that $\sqrt{5}$ is an irrational number.
Q.26	Prove that $7 + 2\sqrt{5}$ is also an irrational number.
Q.27	Find HCF and LCM of 378, 180 and 420 by prime factorization method. Is $\text{HCF} \times \text{LCM}$ of these numbers equal to the product of the given three numbers?

Section D (4 marks each)

Q.28.

Case study-based – 1: February 14 is celebrated as International Book Giving Day and many countries in the world celebrate this day. Some people in India also started celebrating this day and donated the following number of books of various subjects to a public library:

History = 96, Science = 240,

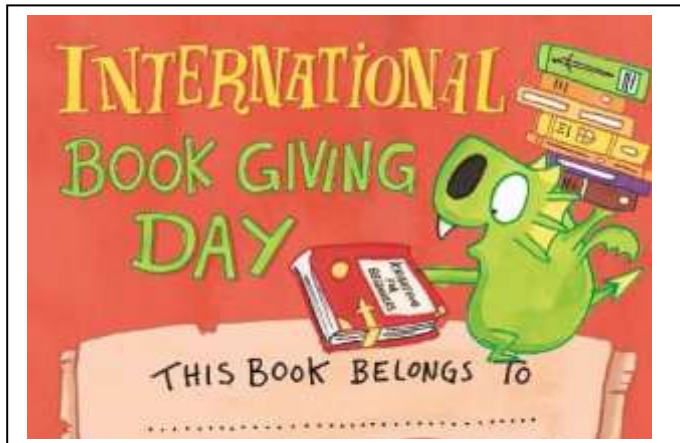
Mathematics = 336.

These books have to be arranged in minimum number of stacks such that each stack contains books of only one subject and the number of books on each stack is the same.

- (i) How many books are arranged in each stack?
- (ii) How many stacks are used to arrange all the Mathematics books?
- (iii)(a) Determine the total number of stacks that will be used for arranging all the books.

OR

(b) If the thickness of each book of History, Science and Mathematics is 1.8 cm, 2.2 cm and 2.5 cm respectively, then find the height of each stack of History, Science and Mathematics books.



Q.29.

Case study-based – 2

From Bengaluru bus stand, if Ratan buys 2 tickets to Malleswaram and 3 tickets to Yeswanthpur it costs him ₹ 46. If he buys 3 tickets to Malleswaram and 5 tickets to Yeswanthpur, the total cost is ₹ 74. Consider the fares from Bengaluru to Malleswaram and that to Yeswanthpur as ₹x and ₹y respectively.

- (i) Represent both situations algebraically in terms of x and y.
- (ii) Find whether the system of equations representing both the situations are consistent or inconsistent
- (iii)(a) Find the fare from Bengaluru to Malleswaram.

OR

(b) Find the fare from Bengaluru to Yeswanthpur.



	Answers							
Answers	1	D	2	C	3	B	4	C
	5	D	6	A	7	D	8	A
	9	B	10	B	11	b	12	a
	13	240, 1440	14	3	15	(0, -6)	16	22338
	17	(5.5, 4.5)	18	$36x^2 - 13x + 1$	19	12, 5, 7, 9, 21	20	₹90,000 and ₹1,20,000
	21	$x = 2, y = 2$ Area = 2 sq. units	22	40 years and 10 years	23	42 and 24	24	40,000 and 10,000
	25	Proof	26	Proof	27	6, 3780, No		
	28	(i)48 (ii)7(iii)(a) 14 OR (b) 86.4 cm, 105.6 cm, 120 cm			29	(i) $2x + 3y = 46, 3x + 5y = 74$ (ii)Consistent (iii) (a) ₹8 OR (b) ₹10		
