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FA-1 SAMPLE PAPER 2 [MOULANA AZAD MODEL SCHOOL, SHIKARIPALYA]

Class 10 - Mathematics

Time All	lowed: 40 minutes Maximum Marks	: 21
Section A		
1.	The product of the two zeroes of the polynomial $3x^2 - 7x - 27$ is:	[1]
	a) 27 b) $\frac{7}{3}$	
	c) 9 d) -9	
2.	The value of k for which the equations $3x - y + 8 = 0$ and $6x + ky = -16$ represent coincident lines, is:	[1]
	a) 2 b) $-\frac{1}{2}$	
	c) $\frac{1}{2}$ d) -2	
3.	If the product of two numbers is 1050 and their HCF is 25, find their LCM.	[1]
4.	If α , β are zeroes of x^2 + 5x + 5, find the value of $\alpha^{-1} + \beta^{-1}$.	[1]
	Section B	
5.	Find the LCM and HCF of the pairs of integers 510 and 92 and verify that LCM \times HCF = product of the two numbers.	[2]
6.	Find the zeroes of the given quadratic polynomials t^2-15 and verify the relationship between the zeroes and	[2]
	the coefficients.	
	If α, β are the zeros of the polynomial $2y^2 + 7y + 5$, write the value of $\alpha + \beta + \alpha\beta$.	
7.	If $2x + y = 23$ and $4x - y = 19$, Find the values of $5y - 2x$ and $\frac{y}{x} - 2$	[2]
Section C		
8.	Prove that $\sqrt{6}$ is irrational.	[3]
9.	The sum of a two digit number and the number obtained by reversing the order of its digits is 121, and the two	[3]
	digits differ by 3. Find the number.	
	OR	
Sangeeta has socks and Handkerchiefs which are together 40 in number. If she has 5 less handkerchiefs and 5 m		e
	socks, the number of socks becomes four times the number of handkerchiefs. Represent this situation algebraically	y
	and graphically.	
Section D		

10. Solve graphically system of linear equations. Also find the coordinates of the points where the lines meet y-axis. **[5]** 2x - y - 5 = 0x - y - 3 = 0