

Assignment 2

Inequality 2

1. Solve : $\frac{x^4 - 3x^2 + 2x^2}{x^2 - x - 30} > 0$

2. Solve : $\frac{20}{(x-3)(x-4)} + \frac{10}{(x-4)} + 1 > 0$

3. If S is the set of all real x such that $\frac{2x-1}{2x^3+3x^2+x}$ is positive then S contains

4. Number of Integral values of x which satisfies the Inequality

$$\frac{(x+6)^2(x+5)(x+1)^2}{(x-3)} \leq 0$$

5. If $\frac{|x|-1}{|x|-2} \geq 0$, $x \in \mathbb{R}$ then x belongs to ?

6. If the solution of the inequality $1 < \frac{3x^2 - 7x + 8}{x^2 + 1} \leq 2$ is $[\alpha, \beta]$ then find the value of $\alpha + \beta$

7. The solution set of the inequality is $\frac{3^x - 4^x}{x^2 - 3x - 4} \geq 0$ is

8. Number of integral values of x satisfying the Inequality

$$\left(\frac{3}{4}\right)^{6x+10-x^2} < \frac{27}{64}$$

9. Number of integral values of the equation $\log_{x-3} \left(\log_{(2x^2-2x+3)} (x^2+2x) \right) = 0$ is

10. The number of integral values of x is $(5x-1) < (x+1)^2 < 7x-3$