

**Elementary problems on Inequalities :**

1.  $\frac{x^2 + 2x - 3}{x^2 + 1} < 0$

2.  $\frac{(x-1)(x+2)^2}{-1-x} < 0$

3.  $\frac{x+1}{(x-1)^2} < 1$

4.  $\frac{x^2 + 6x - 7}{x^2 + 1} \leq 2$

5.  $\frac{x^2 + 2}{x^2 - 1} < -2$

6.  $\frac{(2-x^2)(x-3)^3}{(x+1)(x^2-3x-4)} \geq 0$

7.  $\frac{1}{x-2} - \frac{1}{x} \leq \frac{2}{x+2}$

8.  $\frac{x^4 - 2x^2 - 6}{x^2 + 1} \leq 0$

9.  $\frac{1}{x+2} < \frac{3}{x-3}$

10.  $\frac{5-4x}{3x^2-x-4} < 4$

11.  $\frac{(x+2)(x^2-2x+1)}{4+3x-x^2} \geq 0$

12.  $\frac{1}{x-2} + \frac{1}{x-1} > \frac{1}{x}$

13.  $\frac{(x-2)^{100}(x-3)^{99}(x-4)^{96}}{(x-5)^{97}} \leq 0$

14.  $\frac{x^2-16}{x-4} \geq 0$

15.  $\frac{x}{2x+3} < 4$

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