

INDIANET GROUP

(D.P.P.)

Date: _____	Sub.-Mathematics	Topic-Quadratic Expressions
Time: _____	TARGET IIT	Batch- _____

1. Solve the inequalities $x^2 - 3x + 2 \geq 0$, $x - x^2 + 2 \geq 0$.
2. Find the maximum and the minimum values of $\frac{x^2 + 14x + 9}{x^2 + 2x + 3}$, $x \in \mathbb{R}$.
3. Let $y = \sqrt{\frac{(x+1)(x-3)}{(x-2)}}$. Find all the real values of x for which y takes real values.
4. Find all real values of x , which satisfy $x^2 - 3x + 2 > 0$ and $x^2 - 3x - 4 \leq 0$.
5. Find the values of x for which the following inequality holds:
$$\frac{8x^2 + 16x - 51}{(2x - 3)(x + 4)} > 3.$$
6. Show that if x is real, the expression $\frac{x^2 - bc}{2x - b - c}$ has no real values between b and c .
7. Solve $\frac{x^2 - 3x + 2}{x^2 + 3x + 2} \geq 1$.

