



Inequalities Quadratic/Rational/Modulus



1 Quadratic Inequalities

1. $x^2 + 2x - 15 > 0$
2. $x^2 + 7x + 12 < 0$
3. $x^2 - 3x - 18 \geq 0$
4. $x^2 - x - 12 \leq 0$
5. $2x^2 + 5x + 3 \geq 0$
6. $3x^2 + 19x + 6 < 0$
7. $2x^2 + 3x > 2$
8. $2x^2 - 5x \leq 12$
9. $18 - 25x \geq 3x^2$
10. $x^2 - 9 < 0$
11. $4x^2 \geq 25$
12. $x^2 + 12x \leq 0$
13. $x^2 > 5x$

2 Rational Inequalities

1. $\frac{x+1}{x-2} < 2, \quad x \neq 2$
2. $\frac{x-3}{x+2} < 3, \quad x \neq -2$
3. $\frac{x-2}{x+1} \geq 4, \quad x \neq -1$
4. $\frac{x+3}{x-4} > 2, \quad x \neq 4$





5. $\frac{2x+1}{3x-4} < 1, \quad x \neq \frac{4}{3}$
6. $\frac{3x-2}{2x+1} > 4, \quad x \neq -\frac{1}{2}$
7. $\frac{5x+1}{3x-4} \geq 3, \quad x \neq \frac{4}{3}$
8. $\frac{2x+1}{x-2} > \frac{3}{2}, \quad x \neq 2$
9. $\frac{3x-2}{2x+4} < \frac{1}{4}, \quad x \neq -\frac{1}{2}$
10. $\frac{x+3}{3x-1} \geq -\frac{4}{3}, \quad x \neq 13$
11. $\frac{2x}{x+2} \leq \frac{2}{3}, \quad x \neq -2$
12. $\frac{1-2x}{x-4} \leq -\frac{3}{4}, \quad x \neq 4$

3 Modulus Inequalities

1. $|2x+1| < 3$
2. $|x-1| > 4$
3. $|x+3| \leq 5$
4. $|2x-1| \geq 2$
5. $|2x+3| < 4$
6. $|x+3| > |3x+1|$
7. $|2x-1| \leq |4x+3|$
8. $|x-1| \geq 2|x+2|$
9. $|2x+3| \leq 3|x-3|$
10. $|2x+3| < \frac{3}{2}$
11. $|x-2| \geq \frac{2}{5}$
12. $|x-4| \leq \frac{1}{2}$
13. $|3x+2| > \frac{5}{2}$

