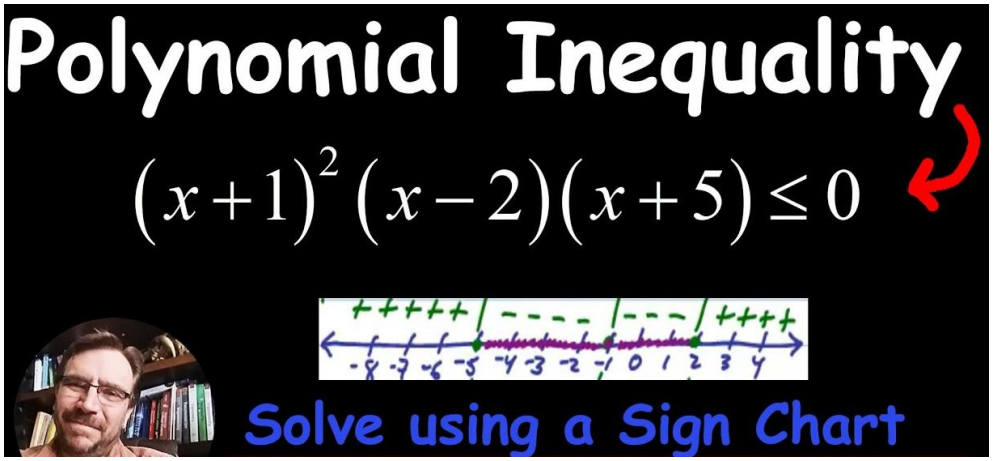
Polynomial and Rational Inequalities:

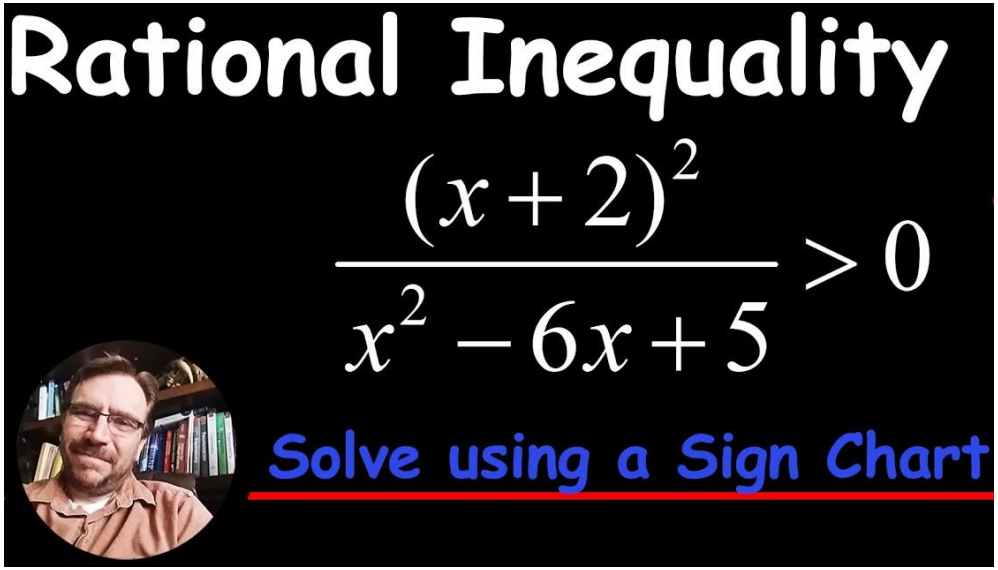
To solve a polynomial or rational inequality, just do the following steps:

1. Get zero on one side.

2. Create the sign chart for the other side.

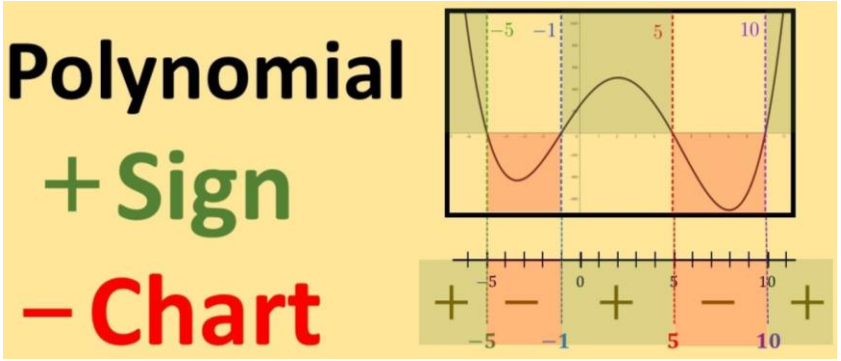
3. Read the solution from the sign chart.





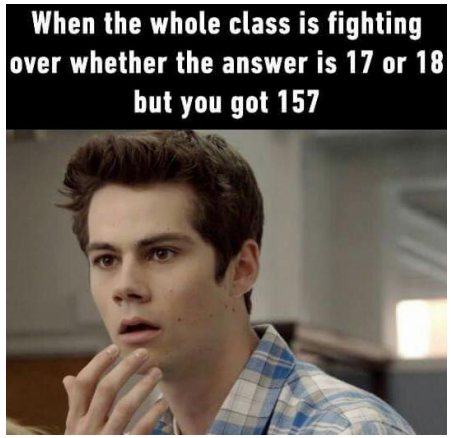
Examples:

1. $(x-5)(x+2)^2 > 0$



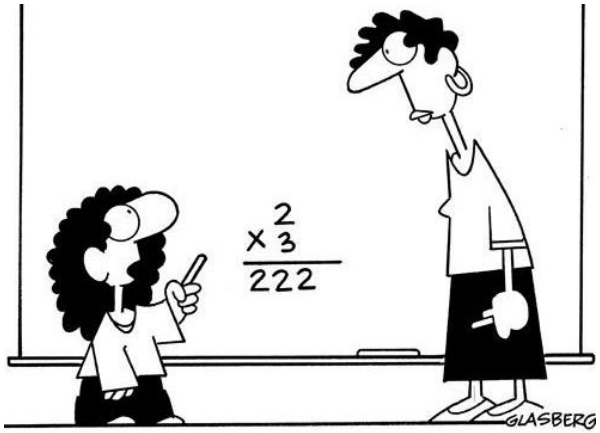
2. $x^3 + 8x^2 < 0$

3. $x^3 + 2x^2 - 3x \geq 0$



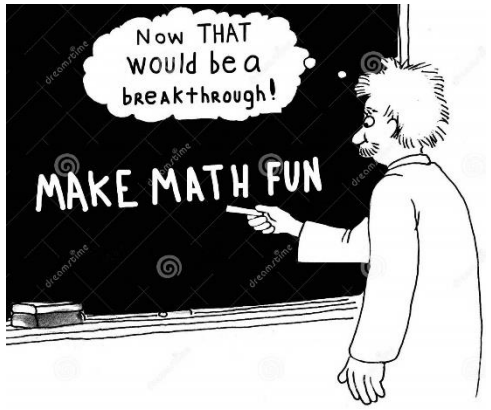
4. $x^4 \leq 9x^2$

5. $x^2 + 4 \leq 4x$



"What do you mean, it's the wrong kind of right?"

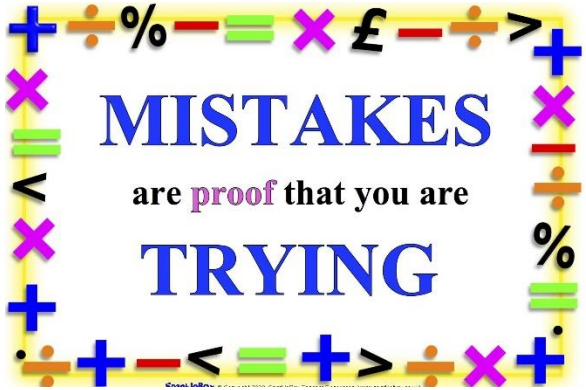
6. $x^2 - 4x \leq -2$



7. $x^2 - 4x + 5 < 0$

8. $\dfrac{x-3}{x+1} > 0$

9. $\dfrac{(x-2)^2}{x^2-1} \geq 0$



10. $\dfrac{x+4}{x-2} \leq 1$

11. $\dfrac{5}{x-3} > \dfrac{3}{x+1}$

12. $\dfrac{1}{x-2} < \dfrac{2}{3x-9}$