

$$1 + \frac{x}{x+1} + \frac{2x^2-4}{4-x^2} > 0$$

$$\text{MCM} : (x+1)(4-x^2) = (x+1)(2-x)(2+x)$$

$$\frac{(x+1)(4-x^2) + x(4-x^2) + (x+1)(2x^2-4)}{(x+1)(2-x)(2+x)} > 0$$

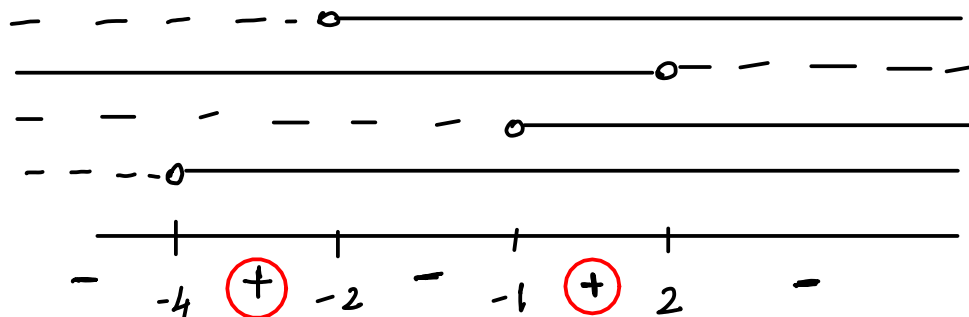
$$\frac{4x - \cancel{x^3} + \cancel{4} - x^2 + 4x - \cancel{x^3} + 2\cancel{x^3} - 4x + 2x^2 - \cancel{4}}{(x+1)(2-x)(2+x)} > 0$$

$$\frac{x^2 + (4+4-4)x}{(x+1)(2-x)(2+x)} > 0$$

$$\frac{x^2 + 4x}{(x+1)(2-x)(2+x)} > 0$$

$$\frac{x(x+4)}{(x+1)(2-x)(2+x)} > 0$$

- $x > 0$
- $x+4 > 0 \Rightarrow x > -4$
- $x+1 > 0 \Rightarrow x > -1$
- $2-x > 0 \Rightarrow x < 2$
- $2+x > 0 \Rightarrow x > -2$



$$-4 < x < -2 \quad \vee \quad -1 < x < 2$$