Ex 3:

Solve $-x^3+6x^2-11x+6<0$

multiply through by (-1):

$$\boxed{x^3-6x^2+11x-6>0}$$

Strict inequality! ↓ Strict!

let $f(x)=x^3-6x^2+11x-6$

divisors of (-6): $\pm1, \pm2, \pm3, \pm6$

$f(1)=0 \Rightarrow (x-1)$ is a factor of $f(x)$.

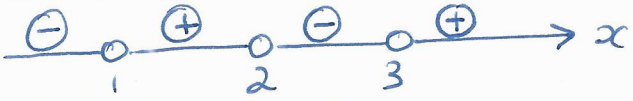
$$\begin{array}{r|l} & x^2-5x+6 \\ \hline x-1 & x^3-6x^2+11x-6 \\ & x^3-x^2 \\ \hline & -5x^2+11x \\ & -5x^2+5x \\ \hline & 6x-6 \\ & 6x-6 \\ \hline & 0 \end{array}$$

$f(x)=(x-1)(x^2-5x+6)=(x-1)(x-2)(x-3)$

$(x-1)(x-2)(x-3)=0$

$x-1=0$ or $x-2=0$ or $x-3=0$

$x=1$ or $x=2$ or $x=3$



$1<x<2$ or $3<x$

$x\in(1,2)\cup(3,+\infty)$