Position of Real Roots.

If $f(x)=0$ be a polynomial equation and $x_1, x_2 \ldots\ldots\ldots\ldots x_k$ are the consecutive real roots of $f(x)=0$, then positive or negative sign of the values of $f(-\infty), f(x) \ldots\ldots\ldots\ldots f(x_k), f(\infty)$ will determine the intervals in which the root of $f(x)=0$ will lie whenever there is a change of sign from $f(x_r)$ to $f(x_{r+1})$ the root lies in the interval $[x_r, x_{r+1}]$.