let $z=2+i$

let $f(z)=z^3-z^2-7z+15$

$z=2+i$

$z^2=(2+i)^2$

$=2^2+4i+i^2$

$=3+4i$

$z^3=(3+4i)(2+i)$

$=6+3i+8i-4$

$=2+11i$

$\therefore z^3-z^2-7z+15=2+11i-3-4i-14-7i+15$

$f(z)=2-3-14+15+11i-4i-7i$

$=0$

Since when $z=2+i$, $f(z)=0$, it shows that $2+i$ is a root of $f(z)$.

Since complex roots occur in conjugate pairs, other root is $2-i$

$\therefore (z-2-i)(z-2+i)(\quad)=z^3-z^2-7z+15$

$(z^2-4z+5)(z+b)=z^3-z^2-7z+15$

Let $z=0$

$5b=15$

$b=3$

$\therefore$ other roots are: $2-i$, -3

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