

Context free grammar for QUAT

- Legend
 - S is the startup string
 - E is the converted expression
 - N is the real number
 - Q is the quatern

$S \rightarrow E$

$S \rightarrow \epsilon$

$E \rightarrow Q$

$E \rightarrow E '+' E$

$E \rightarrow '(' E ')' E \rightarrow E '/' E$

$E \rightarrow E '*' E$

$E \rightarrow E '-' E$

$E \rightarrow \text{ROTATION}(N,Q)$

$E \rightarrow N 'i'$

$E \rightarrow N 'j'$

$E \rightarrow N 'k'$

$E \rightarrow '-' N$

$E \rightarrow N$

$E \rightarrow '-' 'i'$

$E \rightarrow '-' 'j'$

$E \rightarrow '-' 'k'$

$N \rightarrow \text{NUMBER}$