

q-linear-unroll^{11,40}

$\forall k:\mathbb{N}^+, X:(\mathbb{N} \rightarrow \mathbb{Q}), y:(\mathbb{Q} \text{ List}).$

$(k \leq \|y\|)$

$\Rightarrow (\text{q-linear}(k;j.X(j);y) = (\text{q-linear}(k-1;j.X(j);y) + (X(k) * y[(k-1)])) \in \mathbb{Q})$