

fadd_increasing^{4,23}

$\forall n:\mathbb{N}, f, g:(\mathbb{N}_{< n} \rightarrow \mathbb{Z}). \text{ increasing}(f;n) \Rightarrow \text{nondecreasing}(g;n) \Rightarrow \text{increasing}(\text{fadd}(f;g);n)$