decidable-min-lemma^{0,22}

$\forall A$:Type, P:($A\rightarrow$ $\mathbb{N}$ $\rightarrow$Prop).
($\forall s$:A. Dec($\exists k$:$\mathbb{N}$. $\neg P(s,k)$))
$\Rightarrow$ ($\forall s$:A, k:$\mathbb{N}$. Dec($P(s,k)$))
$\Rightarrow$ ($\forall s$:A. Dec($\exists v$:$\mathbb{N}$. $\neg P(s,v)$ & ($\forall n$:$\mathbb{N}$. $n<v \Rightarrow P(s,n)$)))

http://www.cs.cornell.edu/Info/Projects/NuPrl/FDLcontent/p0_286125_/p11_786245_{decidable-min-lemma}.html