

decidable-min-lemma^{11,40}

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