Linear Independence

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Theorem 1.1 *.2*
Let $\vec{v}_1, \ldots, \vec{v}_k \in \mathbb{R}^n$*. There exists a vector* $\vec{v}_i$ *s.t.* $\vec{v}_i \in$ *Span* $\{\vec{v}_1, \ldots, \vec{v}_{i-1}, \vec{v}_{i+1}, \ldots, \vec{v}_k\}$ *if and only if Span* $\{\vec{v}_i, \ldots, \vec{v}_k\}$ = *Span* $\{\vec{v}_1, \ldots, \vec{v}_{i-1}, \vec{v}_{i+1}, \ldots, \vec{v}_k\}$

Proof
" => "
Let $\vec{x} \in$ Span $\{\vec{v}_i, \ldots, \vec{v}_k\}$