

c) (version 1)

Range  $\Gamma$  = the set of  $\Gamma(S)$ ,

for all  $S \in \mathcal{L}(V/U \rightarrow W)$

= the set of  $S \circ \pi$

for all  $S \in \mathcal{L}(V/U \rightarrow W)$

(by statement definition)

= the set of  $T = S \circ \pi$

for all  $S \in \mathcal{L}(V/U \rightarrow W)$

(by labelling)

= the set of  $T$  such that

$T(u) = 0$  for all  $u \in U$

(by 3E18, which states that

$U \subset \text{null } T$ )

=  $\{ T \in \mathcal{L}(V, W) : T_u = 0 \text{ for every } u \in U \}$