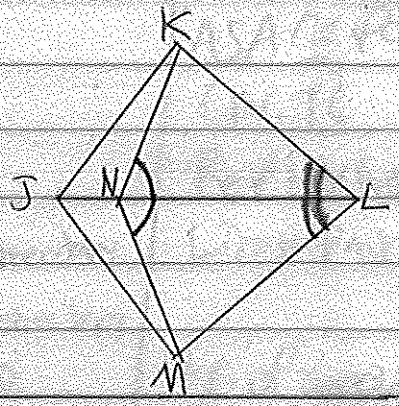
Question 21 David Lim

Given: $\angle KNL \cong \angle MNL$; $\angle KLN \cong \angle MLN$

Prove: $\triangle JNK \cong \triangle JNM$



$\angle KNL \cong \angle MNL$; $\angle KLN \cong \angle MLN$	Given
$\overline{NL} \cong \overline{NL}$	Reflexive
$\triangle NKL \cong \triangle NML$	ASA $\cong$ Post.
$\overline{NK} \cong \overline{NM}$	CPCTC
$\overline{JN} \cong \overline{JN}$	Reflexive
$\angle KNJ$ and $\angle KNL$ are supplementary	Linear Pair Postulate
$\angle MNJ$ and $\angle MNL$ are supplementary	
$m\angle KNJ + m\angle KNL = 180$	Def. of supplementary angles
$m\angle MNJ + m\angle MNL = 180$	
$m\angle KNL = m\angle MNL$	Def. of $\cong$ angles
$m\angle MNJ + m\angle KNL = 180$	Subst.
$m\angle KNJ + m\angle KNL = m\angle MNJ + m\angle KNL$	subst.
$m\angle KNJ = m\angle MNJ$	subtr.
$\angle KNJ \cong \angle MNJ$	Def. of $\cong$ angles
$\triangle JNK \cong \triangle JNM$	SAS $\cong$ post.