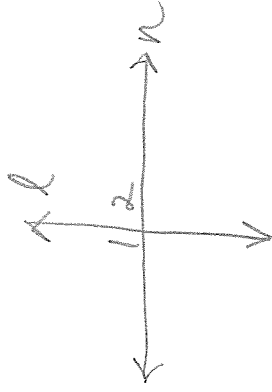


Thm: If 2 lines form \cong adjacent \angle s, then lines are \perp .



Given: $\angle 1 \cong \angle 2$

Prove: $l \perp n$

① $\angle 1 \cong \angle 2 \rightarrow$ ② $m\angle 1 = m\angle 2$

③ $\angle 1$ & $\angle 2$ are a \rightarrow ④ $\angle 1$ & $\angle 2$ are \rightarrow ⑤ $m\angle 1 + m\angle 2 = 180$
linear pair. Supplementary.

\rightarrow ⑥ $m\angle 1 + m\angle 1 = 180$
 $m\angle 2 + m\angle 2 = 180$

\rightarrow ⑦ $2m\angle 1 = 180 \rightarrow$ ⑧ $m\angle 1 = 90$
 $2m\angle 2 = 180 \rightarrow$ $m\angle 2 = 90$ \rightarrow ⑨ $\angle 1$ & $\angle 2$ are Rt. \angle s \rightarrow ⑩ $l \perp n$

① Given

② \cong \angle s have = measures.

③ A linear pair are 2 adjacent \angle s that form a straight angle.

④ A linear pair are 2 \angle s supplementary.

⑤ Supple. \angle s are 2 \angle s whose sum is 180° .

⑥ Substitution

⑦ Simplification/Distributive Prop.

⑧ Division Prop.

⑨ Rt. \angle s have 90° .

⑩ \perp lines form Rt. \angle s.

