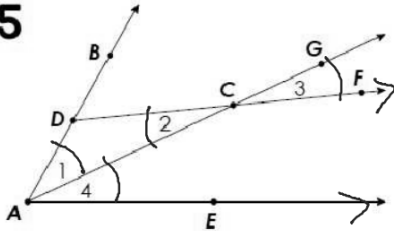


## PROOF 5

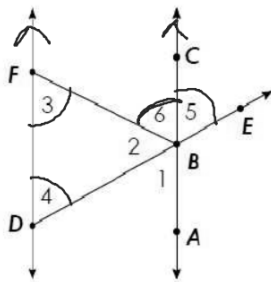


Given:  $\overline{DF} \parallel \overline{AE}$ ,  $\overline{AC}$  bisects  $\angle BAE$

Prove:  $\angle 1 \cong \angle 3$

Statement	Reason
1) $\overline{DF} \parallel \overline{AE}$ $\overline{AC}$ bisects $\angle BAE$	1) Given
2) $\angle 1 \cong \angle 4$	2) Def Bisector
3) $\angle 4 \cong \angle 2$	3) Alternate Int
4) $\angle 2 \cong \angle 3$	4) Vertical $\angle$ 's
5) $\angle 1 \cong \angle 3$	5) Substitution prop.

## PROOF 2

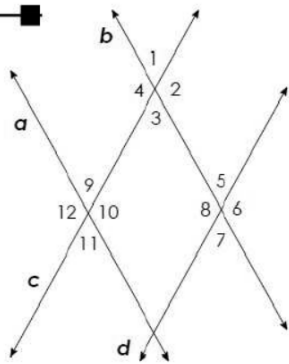


Given:  $\overline{FD} \parallel \overline{CA}$ ,  $\angle 3 \cong \angle 4$

Prove:  $\angle 5 \cong \angle 6$

Statement	Reason
1) $\overline{FD} \parallel \overline{CA}$ $\angle 3 \cong \angle 4$	1) Given
2) $\angle 4 \cong \angle 5$	2) Corresponding L's
3) $\angle 3 \cong \angle 6$	3) Alternate Int
4) $\angle 5 \cong \angle 6$	4) Substitution prop.

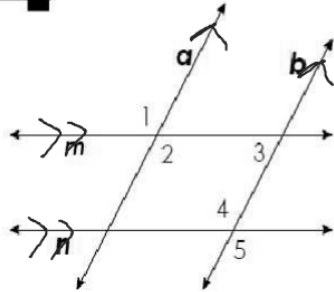
**PROOF I**



Given:  $c \parallel d$ ,  $\angle 12 \cong \angle 8$

Prove:  $a \parallel b$

## PROOF 6



Given:  $a \parallel b$ ,  $m \parallel n$

Prove:  $\angle 1 \cong \angle 5$

Statement	Reason
1) $a \parallel b$ , $m \parallel n$	1) Given
2) $\angle 1 \cong \angle 2$ , $\angle 4 \cong \angle 5$	2) Vertical $\angle$ 's
3) $\angle 2$ & $\angle 3$ are Supp $\angle 3$ & $\angle 4$ are Supp	3) Same-Side Interior
4) $m\angle 2 + m\angle 3 = 180$ $m\angle 3 + m\angle 4 = 180$	4) Def of Supp $\angle$ 's
5) $m\angle 2 + m\angle 3 = m\angle 3 + m\angle 4$	5) Substitution
6) $m\angle 2 = m\angle 4$	6) Subtraction
7) $\angle 1 \cong \angle 5$	7) Substitution