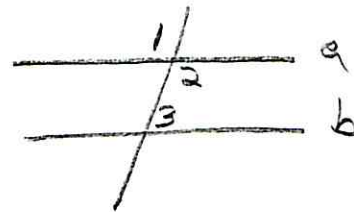


3.2 Proving Lines Parallel

- ① Given: $\angle 1$ & $\angle 3$ are supplementary
Prove: $a \parallel b$

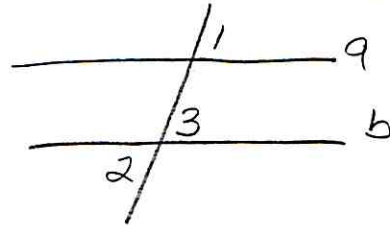


Prove these theorems

- ② If 2 lines and a transversal form congruent alternate exterior angles, then the 2 lines are parallel.

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

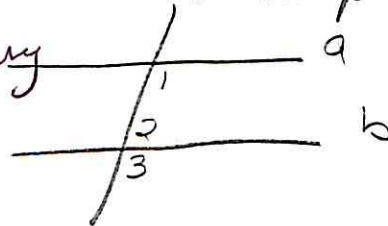
Prove: $a \parallel b$



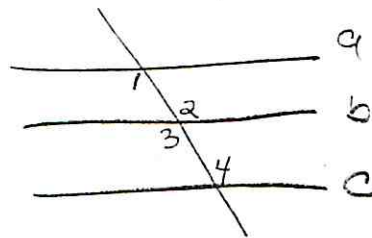
- ③ If 2 lines and a transversal form supplementary same side interior angles, then the 2 lines are parallel.

Given: $\angle 1$ and $\angle 2$ are supplementary

Prove: $a \parallel b$



- ④ Given: $\angle 1 \cong \angle 2$
 $\angle 3 \cong \angle 4$
Prove: $a \parallel c$



- ⑤ Given: $\angle 1$ & $\angle 3$ are supplementary
 $\angle 2$ & $\angle 4$ are supplementary
Prove: $a \parallel c$

