

1) Given: $a \parallel b$
 Prove: $\angle 1$ and $\angle 8$ supplementary

2) Given: $m\angle 2 = m\angle 3 + m\angle 5$
 Prove: $m\angle 4 = m\angle 1 + m\angle 5$

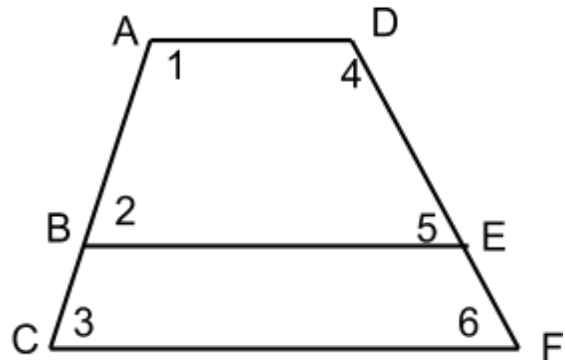
3) Given: $\angle 2 \cong \angle 8$
 Prove: $a \parallel b$

4) Given: $\angle 1$ and $\angle 8$ supplementary
 Prove: $\angle 3 \cong \angle 5$

5) Given: $\angle 1$ and $\angle 3$ supplementary
 Prove: $\angle 2$ and $\angle 4$ supplementary

7) Given: $AD \parallel BE$, $AD \parallel CF$
 Prove: $BE \parallel CF$

8) Given: $BE \parallel CF$ $m\angle 3 - m\angle 5 = 10$
 Prove: $m\angle 2 - m\angle 6 = 10$



If parallel lines then:

Alternate Interior Angles Congruent

Alternate Exterior Angles Congruent

Corresponding Angles Congruent

Same-side Interior Angles Supplementary (add up to 180)

Converses are also true!!!