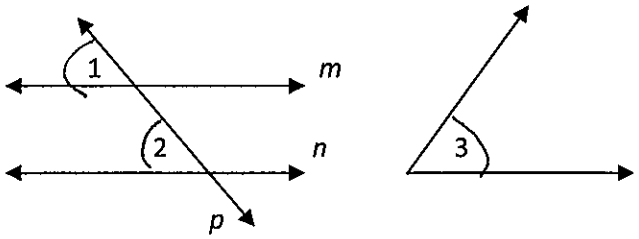
Geometry Honors
3-2 Practice Proofs

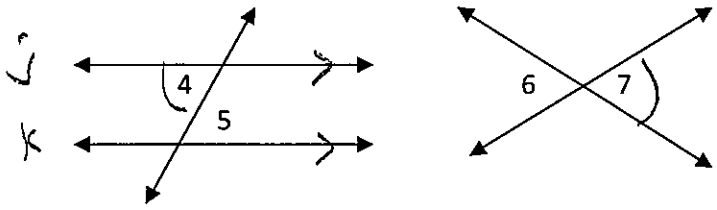
Name Key

1. Given: $m \parallel n$, $\angle 2 \cong \angle 3$
   Prove: $\angle 1 \cong \angle 3$



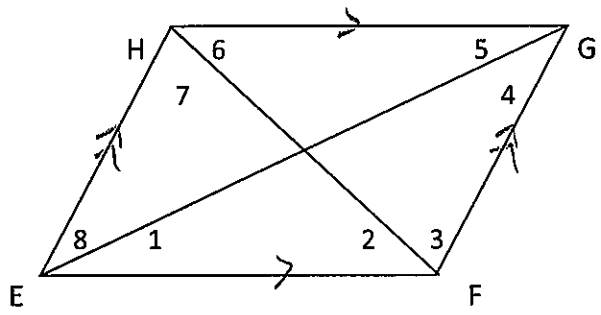
Statements	Reasons
1. $m \parallel n$; $\angle 2 \cong \angle 3$	1. Given
2. $\angle 1 \cong \angle 2$	2. $\parallel$ lines $\rightarrow$ corr. $\angle$s $\cong$
3. $\angle 1 \cong \angle 3$	3. Transitive.

2. Given: $j \parallel k$, $\angle 4 \cong \angle 7$
   Prove: $\angle 5 \cong \angle 6$



Statements	Reasons
1. $j \parallel k$; $\angle 4 \cong \angle 7$	1. Given
2. $\angle 5 \cong \angle 4$	2. $\parallel$ lines $\rightarrow$ Alt. int. $\angle$s $\cong$
3. $\angle 7 \cong \angle 6$	3. Vert. $\angle$s $\cong$
4. $\angle 5 \cong \angle 6$	4. Transitive

3. Given: $\overline{HG} \parallel \overline{EF}, \overline{HE} \parallel \overline{GF}$
   Prove: $\angle GHE \cong \angle EFG$



Statements	Reasons
1. $\overline{HG} \parallel \overline{EF}$; $\overline{HE} \parallel \overline{GF}$	1. Given
2. $\angle GHE$ is supp. to $\angle HEF$	2. $\parallel$ lines $\Rightarrow$ S-S int. $\angle$s supp.
$\angle GFE$ is supp. to $\angle HEF$	
3. $\angle GHE \cong \angle EFG$	3. 2 $\angle$s supp. of same $\angle \cong$