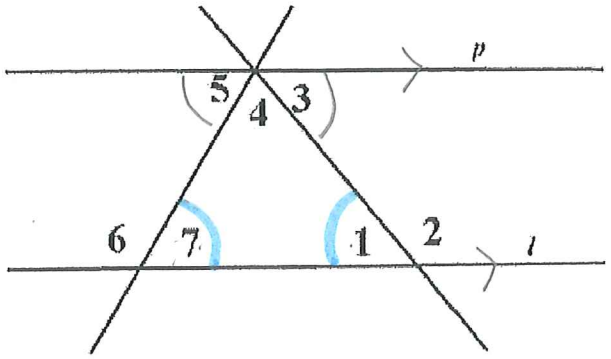
Day 5

Name: _____ Date: _____ Hr: _____

Parallels Cut by Transversals Proofs Assignment

1. Given: $\angle 7 \cong \angle 1$ and $l \parallel p$

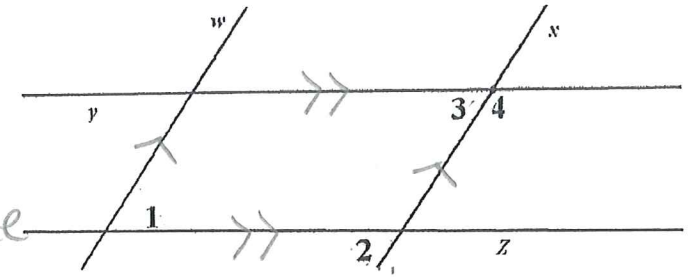
Prove: $\angle 5 \cong \angle 3$



1. $\angle 7 \cong \angle 1, \ell \parallel p$ — 1. given
2. $\angle 7 \cong \angle 5$, $\angle 1 \cong \angle 3$ — 2. alternate interior $\angle$ are $\cong$
3. $\angle 7 \cong \angle 3$ — 3. substitution
4. $\angle 5 \cong \angle 3$ — 4. substitution

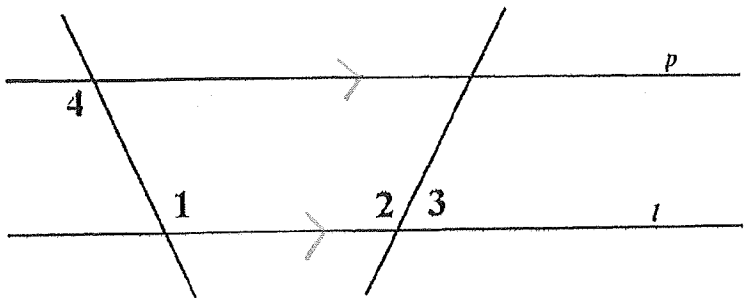
2. Given: $w \parallel x$ and $y \parallel z$

Prove: $\angle 1$ and $\angle 4$ are supplementary



1. $w \parallel x$, $y \parallel z$ — 1. given
2. $\angle 1 \cong \angle 2$ — 2. alternate interior $\angle$ are $\cong$
3. $\angle 2 \cong \angle 3$ — 3. corresponding angles are $\cong$
4. $\angle 3 + \angle 4 = 180$ — 4. Linear Pairs are supplementary
5. $\angle 2 + \angle 4 = 180$ — 5. substitution
6. $\angle 1 + \angle 4 = 180$ — 6. substitution
7. $\angle 1$ and $\angle 4$ are supplementary — 7. def of supplementary

3. Given: $\angle 1 \cong \angle 2$ and $l \parallel p$
Prove: $\angle 3 + \angle 4 = 180°$



1. $\angle 1 \cong \angle 2$, $l \parallel p$	1. given
2. $\angle 4 \cong \angle 1$	2. alternate interior $\angle$ are $\cong$
3. $\angle 2 + \angle 3 = 180$	3. Linear Pairs are supplementary
4. $\angle 1 + \angle 3 = 180$	4. substitution
5. $\angle 4 + \angle 3 = 180$	5. substitution