

Geometry – Homework

Unit 2- Parallel Line Proofs

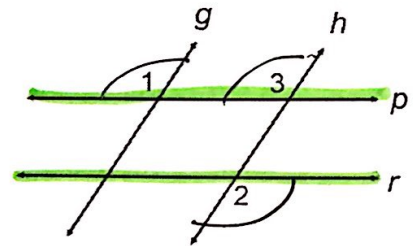
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Period: 2 4 7

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1.) Given that $p \parallel r$ and $\angle 1 \cong \angle 2$, prove that $g \parallel h$.

Statement	Reason
① $p \parallel r$	① Given
② $\angle 1 \cong \angle 2$	② Given
③ $\angle 2 \cong \angle 3$	③ If \parallel , then alt. ext. \angle s are \cong
④ $\angle 1 \cong \angle 3$	④ substitution (or transitive)
⑤ $g \parallel h$	⑤ If corr. \angle s \cong , then \parallel .



2.) Given that $t \parallel s$ and $\angle 1 \cong \angle 2$, prove that $n \parallel m$.

Statements	Reasons
① $t \parallel s$	① Given
② $\angle 1 \cong \angle 2$	② Given
③ $\angle 2 \cong \angle 3$	③ If \parallel , then alt. int. $\angle s \cong$
④ $\angle 1 \cong \angle 3$	④ Transitive (substitution)
⑤ $n \parallel m$	⑤ If alt. int. $\angle s \cong$, then \parallel .

