

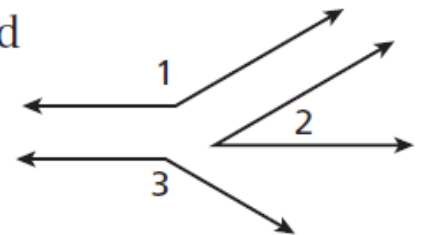


Properties of Congruence

SYMBOLS	EXAMPLE
Reflexive Property of Congruence figure $A \cong$ figure A (Reflex. Prop. of \cong)	$\overline{EF} \cong \overline{EF}$
Symmetric Property of Congruence If figure $A \cong$ figure B , then figure $B \cong$ figure A . (Sym. Prop. of \cong)	If $\angle 1 \cong \angle 2$, then $\angle 2 \cong \angle 1$.
Transitive Property of Congruence If figure $A \cong$ figure B and figure $B \cong$ figure C , then figure $A \cong$ figure C . (Trans. Prop. of \cong)	If $\overline{PQ} \cong \overline{RS}$ and $\overline{RS} \cong \overline{TU}$, then $\overline{PQ} \cong \overline{TU}$.

Fill in the blanks to complete a two-column proof of one case of the Congruent Supplements Theorem.

1. **Given:** $\angle 1$ and $\angle 2$ are supplementary, and $\angle 2$ and $\angle 3$ are supplementary.
Prove: $\angle 1 \cong \angle 3$



Statement	Reasons
Step 1:	_____
Step 2:	_____
Step 3:	_____
Step 4:	_____
Step 5:	_____
Step 6:	_____



Geometry

Unit 3—Formal Proofs

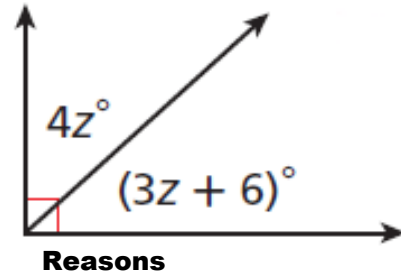
Day 15—geometric proofs

Name: _____

Period: _____

3. Given: the diagram to the right

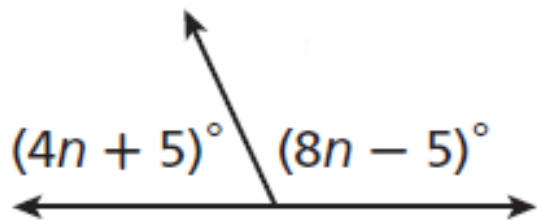
Prove: solve for z using step by step



Statement	Reasons
Step 1:	_____
Step 2:	_____
Step 3:	_____
Step 4:	_____
Step 5:	_____
Step 6:	_____

4. Given: the diagram to the right

Prove: solve for n using step by step



Statement	Reasons
Step 1:	_____
Step 2:	_____
Step 3:	_____
Step 4:	_____
Step 5:	_____