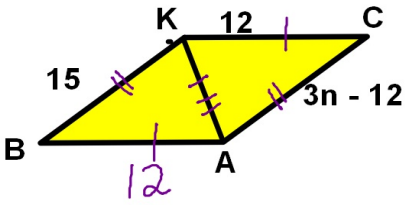
4-1 Using Congruent Triangles

Oct 19

Ex. 1



$\triangle BAK \cong \triangle CKA$

find n

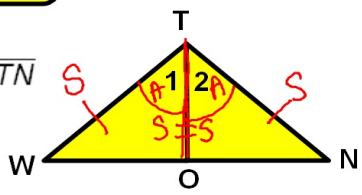
$3n - 12 = 15$

4 - 2 Ways to Prove Triangles Congruent

ex. 2

Given: $\overline{TO}$ **bisects** $\angle$ **WTN,** $\overline{TW} \cong \overline{TN}$

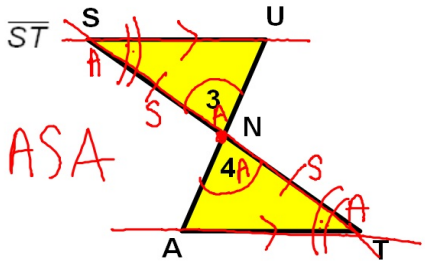
Prove: $\triangle TOW \cong \triangle TON$



STATEMENTS	REASONS
① $\overline{TO}$ bisects $\angle WTN$, $\overline{TW} \cong \overline{TN}$ (S)	① Given
② $\angle 1 \cong \angle 2$ (A)	② $\angle$ bisector makes $\cong \angle$s
③ $\overline{TO} \cong \overline{TO}$ (S)	③ reflexive
④ $\triangle TOW \cong \triangle TON$	④ SAS $\cong$

Ex. 2 **Given:** $\overline{SU} \parallel \overline{AT}$, N is midpoint of $\overline{ST}$

Prove: $\triangle SUN \cong \triangle TAN$



ASA

Statements	Reasons
① $\overline{SU} \parallel \overline{AT}$, N is midpt of $\overline{ST}$	① Given
② $\angle 3 \cong \angle 4$ A	② vert. $\angle$s $\cong$
③ $\overline{SN} \cong \overline{TN}$ S	③ defn midpt (midpt makes $\cong$ segments)
④ $\angle S \cong \angle T$ A	④ If lines $\parallel$, alt. int $\angle$s $\cong$
⑤ $\triangle SUN \cong \triangle TAN$	⑤ ASA $\cong$