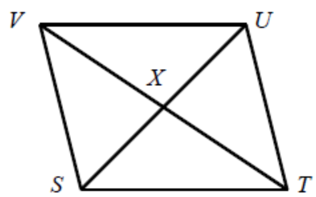
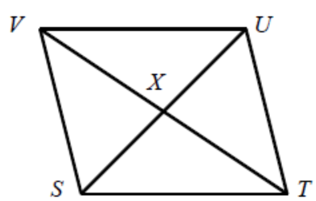
Given: $\overline{VU} \cong \overline{ST}$ and $\overline{SV} \cong \overline{TU}$

Prove: $VX = XT$



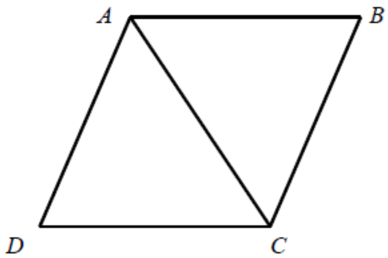
1. $\overline{VU} \cong \overline{ST}$ and $\overline{SV} \cong \overline{TU}$	1. Given
2. $STUV$ is a parallelogram	2. If both pairs of opp. sides of a quad. are $\cong$, then the quad is a parallelogram.
3. $VX = XT$	3. The diagonals of a parallelogram bisect each other.

Given: $\overline{SV} \cong \overline{TU}$ and $\overline{SV} \parallel \overline{TU}$
Prove: $VX = XT$



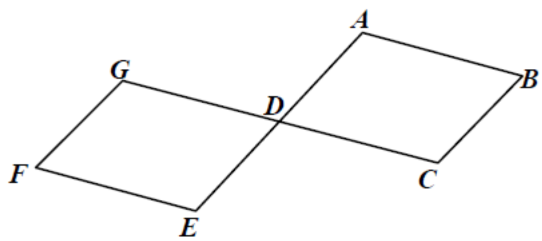
1. $\overline{SV} \cong \overline{TU}$ and $\overline{SV} \parallel \overline{TU}$	1. Given
2. $STUV$ is a parallelogram	2. If one pair of opp. sides of a quad. are both $\parallel$ and $\cong$, then the quad is a parallelogram.
3. $VX = XT$	3. The diagonals of a parallelogram bisect each other.

Given: *ABCD* is a rhombus.
Prove: $\Delta\ BCA \cong \Delta\ DAC$



1. $ABCD$ is a rhombus	1. Given
2. $ABCD$ is a a parallelogram	2. Definition of a rhombus
3. $\Delta BCA \cong \Delta DAC$	3. The diagonals of a parallelogram form two congruent triangles.

Given that $ABCD$ and $EFGD$ are parallelograms and that D is the midpoint of $\overline{CG}$ and $\overline{AE}$, prove that $ABCD$ and $EFGD$ are congruent.



They should use the def. of midpoint and opposite sides of a parallelogram are $\cong$ to show that $\overline{AD} \cong \overline{DE} \cong \overline{FG} \cong \overline{BC}$ and $\overline{GD} \cong \overline{DC} \cong \overline{AB} \cong \overline{EF}$. Then, using the vert. $\angle$ thm. and opposite $\angle$'s of a parallelogram are $\cong$, show that $\angle GDE \cong \angle ADC \cong \angle B \cong \angle F$.
$\angle G \cong \angle E \cong \angle C \cong \angle A$, since opposite angles are = and add to 360° in a parallelogram. Therefore $ABCD \cong EFGD$ because their corresponding sides and corresponding $\angle$'s $\cong$.