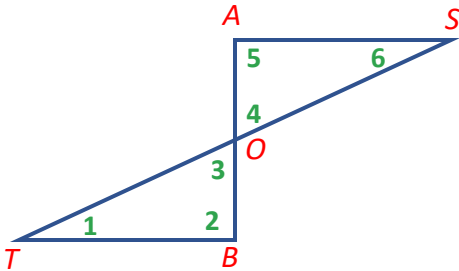


Example Proof:

Given: $\overline{SA} \parallel \overline{TB}$

O is the midpoint of \overline{BT}

Prove: $\triangle TOB \cong \triangle SOA$



Statements	Reasons

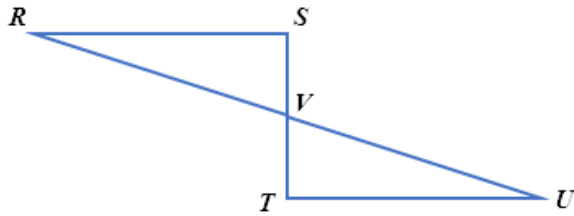
For every proof:

- Copy the diagram, the given and the prove statements onto your paper.
- Setup the statements and reasons columns.
- Write the givens and add geometric markings to your drawing.
- Try your best to finish. Get help if you need it, but do not copy someone else's work.

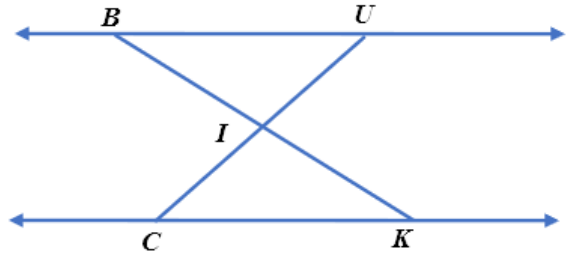


<p>1. Given: $\overline{RT} \cong \overline{RU}$ $\overline{TS} \cong \overline{US}$ Prove: $\triangle RTS \cong \triangle RUS$</p>	<p>2. Given: D is the midpoint of \overline{AB} $\angle CDA \cong \angle CDB$ Prove: $\triangle ADC \cong \triangle BDC$</p>	<p>3. Given: \overline{QN} bisects $\angle MQP$ $\overline{MQ} \cong \overline{PQ}$ Prove: $\triangle MQN \cong \triangle PQN$</p>
<p>4. Given: S is the midpoint of \overline{RT} $\angle R$ and $\angle T$ are right angles $\angle VSR \cong \angle UST$ Prove: $\triangle SRV \cong \triangle STU$</p>	<p>5. Given: $\angle WRO$ and $\angle DRL$ are vertical \angle's $\angle W \cong \angle D$ $\overline{OW} \cong \overline{LD}$ Prove: $\triangle WOR \cong \triangle DLR$</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>*If a diagram has vertical angles you can use them in the proof even if not stated in given information.</p> </div>	

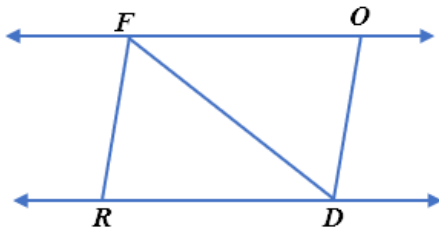
6. **Given:** $\overline{RS} \perp \overline{ST}$; $\overline{TU} \perp \overline{ST}$
 V is the midpoint of \overline{ST}
Prove: $\triangle RSV \cong \triangle UTV$



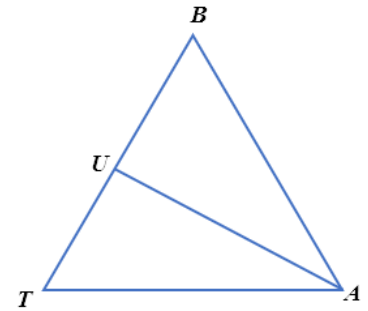
7. **Given:** $\overline{BU} \parallel \overline{CK}$
 $\overline{CI} \cong \overline{IU}$
Prove: $\triangle BUI \cong \triangle KCI$



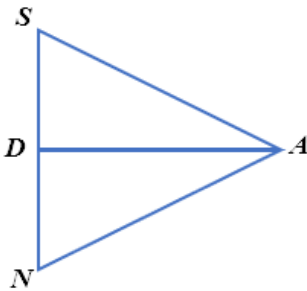
8. **Given:** $\overline{FO} \parallel \overline{RD}$
 $\overline{FO} \cong \overline{RD}$
Prove: $\triangle RDF \cong \triangle OFD$



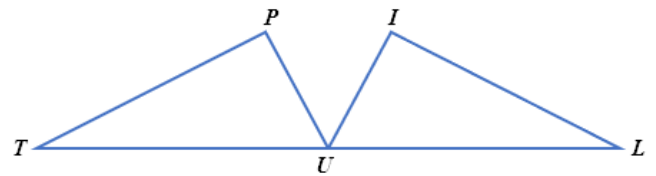
9. **Given:** $\triangle TBA$ is equilateral
 U is the midpoint of \overline{BT}
Prove: $\triangle TUA \cong \triangle BUA$



10. **Given:** $\overline{SN} \perp \overline{DA}$
 \overline{DA} bisects $\angle SAN$
Prove: $\triangle SAD \cong \triangle NAD$

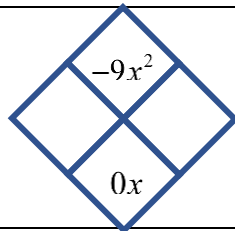


11. **Challenge:**
Given: U is the midpoint of \overline{TL}
 $\angle T \cong \angle L$
 \overline{UP} bisects $\angle TUI$
 \overline{UI} bisects $\angle PUL$
Prove: $\triangle TUP \cong \triangle LUI$



Factor each

15. $x^2 - 9$
 x^2 $\underline{\quad}$ $\underline{\quad}$ -9



16. $25x^2 - 1$

17. $x^2 - 1$

18. $9x^2 - 4$