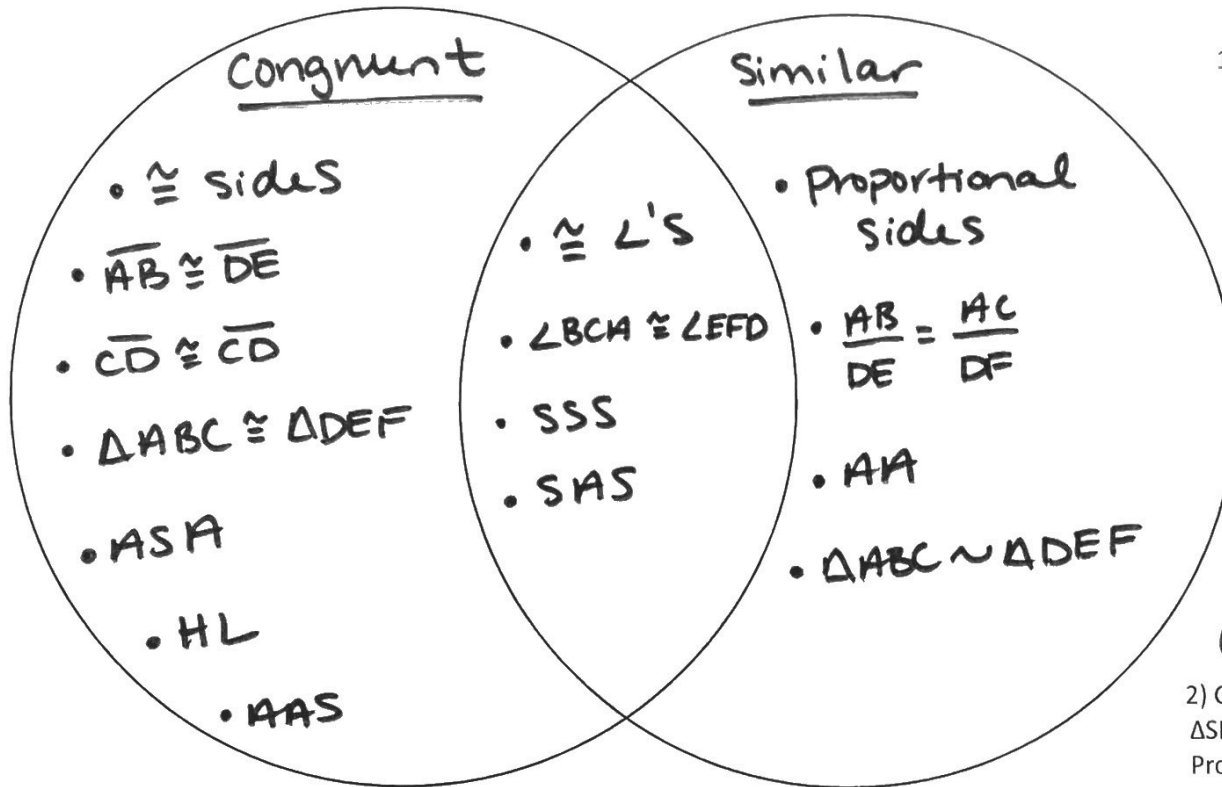


4.3 Congruent Versus Similar Triangles

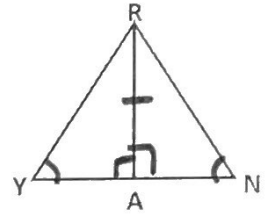


- ✓ Congruent angles
- ✓ Congruent sides
- ✓ Proportional sides
- ✓ SSS
- ✓ SAS
- ✓ ASA

- ✓ HL
- ✓ AA
- ✓ AAS
- ✓ $AB \cong DE$
- ✓ $\frac{AB}{DE} = \frac{AC}{DF}$
- ✓ $CD \cong CD$

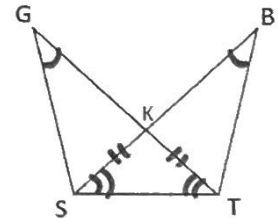
- ✓ $\Delta ABC \sim \Delta DEF$
- ✓ $\angle BCA \cong \angle EFD$
- ✓ $\Delta ABC \cong \Delta DEF$

1) Given: RA is an altitude
 $\angle RYA \cong \angle RNA$
 Prove: $\Delta RYA \cong \Delta RNA$



Statement	Reason
① RA is an alt.	① Given
② $\angle RAY$ & $\angle RAN$ are rt \angle 's.	② Altitudes are \perp & form rt \angle 's.
③ $\angle RAY \cong \angle RAN$	③ Def. of right \angle 's.
④ $\angle RYA \cong \angle RNA$	④ Given
⑤ $RA \cong RA$	⑤ Reflexive Prop.
⑥ $\Delta RYA \cong \Delta RNA$	⑥ AAS

2) Given: $\angle SGK \cong \angle TBK$
 ΔSKT is isosceles with $\angle SKT$ as the vertex angle
 Prove: $\Delta SGT \sim \Delta TBS$



Statement	Reason
① $\angle SGK \cong \angle TBK$	① Given
② ΔSKT is isos. w/ $\angle SKT$ as vertex \angle .	② Given
③ $\angle KST \cong \angle KTS$	③ Base angles are \cong in isos. Δ .
④ $\Delta SGT \sim \Delta TBS$	④ AA \sim