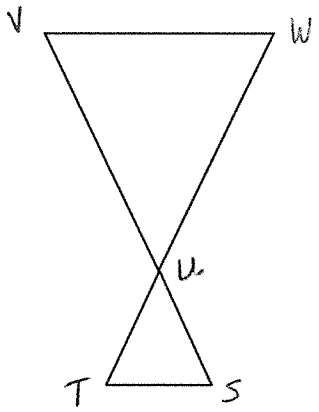
Proving Triangle Similarity - SAS

Unit 4: Similarities

Prove each of the following using an emphasis on the Side-Angle-Side (SAS) Similarity Theorem:

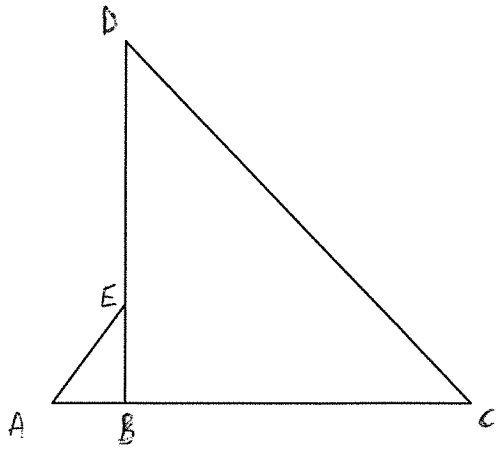
1. **Given:** $\overline{TU}$ = 15
   $\overline{SU}$ = 10
   $\overline{WU}$ = 90
   $\overline{UV}$ = 60

   Prove: Δ TUS ~ Δ WUV



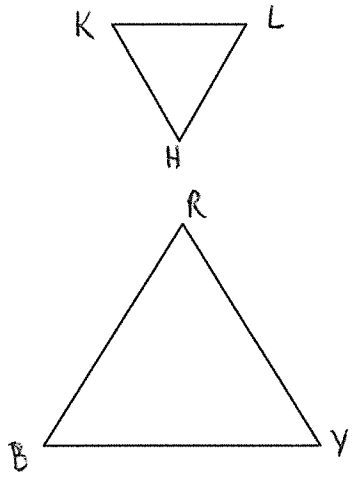
2. **Given:** $\overline{AB}$ = 6
   $\overline{EB}$ = 8
   $\overline{ED}$ = 32
   $\overline{BC}$ = 30
   $\overline{BD} \perp \overline{AC}$

   Prove: Δ AEB ~ Δ CDB



3. **Given:** ∠ K = 43°
∠ L = 62°
∠ R = 75°
∠ B = 43°
$\overline{KH}$ = 7
$\overline{HL}$ = 9
$\overline{BR}$ = 28
$\overline{RY}$ = 36

Prove: Δ KHL ~ Δ BRY



4. **Given:** ∠ DFE = 30°
∠ FDE = 25°
∠ A = 30°
∠ B = 125°
$\overline{BC}$ = 6
$\overline{DC}$ = 2
$\overline{DE}$ = 3
$\overline{DF}$ = 4
$\overline{AF}$ = 2

Prove: Δ ABC ~ Δ FED