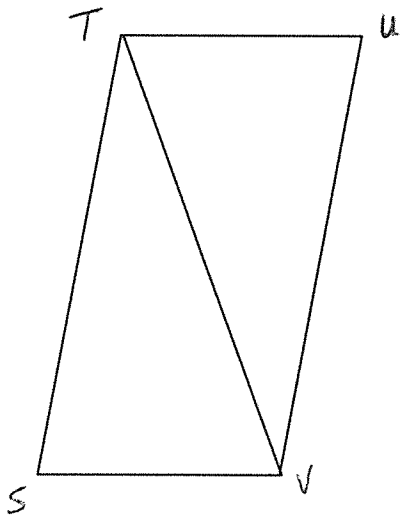
Proofs Mixed Review – Day 3

Unit 4: Similarities

Prove the following triangles are congruent using SSS, SAS, AAS, ASA, or HL:

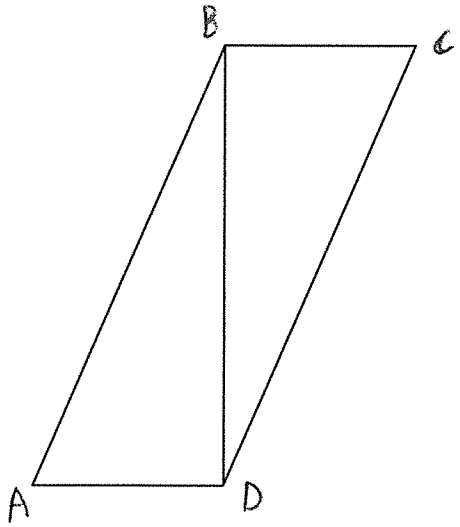
1. **Given:** STUV is a parallelogram

   Prove: Δ STV ≅ Δ UVT



2. **Given:** $\overline{BD} \perp \overline{BC}$
   $\overline{BD} \perp \overline{AD}$
   ABCD is a parallelogram

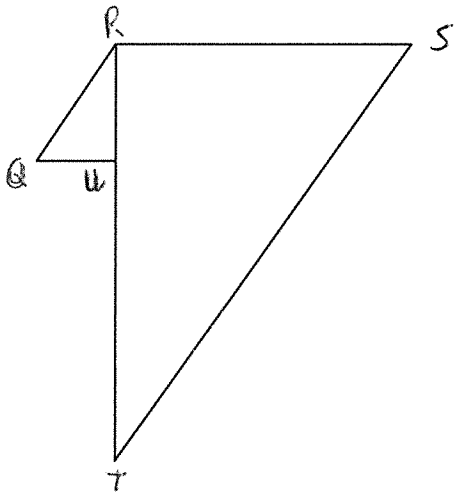
   Prove: Δ ABD ≅ Δ CDB



Prove the following triangles are similar using SSS, SAS, or AA:

3. **Given:** $\overline{RS} \perp \overline{RT}$
   $\overline{RU} \perp \overline{QU}$
   $\overline{RS} = 56$
   $\overline{ST} = 119$
   $\overline{TU} = 90$
   $\overline{QU} = 8$
   $\overline{UR} = 15$

Prove: Δ RUQ ~ Δ TRS



4. **Given:** ∠ A = 52°
   ∠ C = 68°
   ∠ X = 60°
   ∠ W = 52°
   $\overline{AB} = 15$
   $\overline{BC} = 10$
   $\overline{AC} = 5$
   $\overline{XY} = 14$
   $\overline{WX} = 21$
   $\overline{WY} = 7$

Prove: Δ ABC ~ Δ WXY