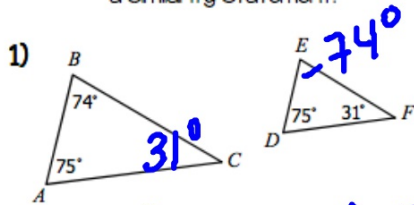


Triangle Similarity

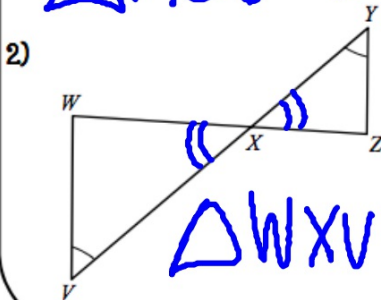
AA~ Angle-Angle Similarity

If two corresponding angles are **congruent**, then the triangles are similar.

Determine if the examples below are similar by AA~. If yes, write a similarity statement.



$$\triangle ABC \sim \triangle DEF$$

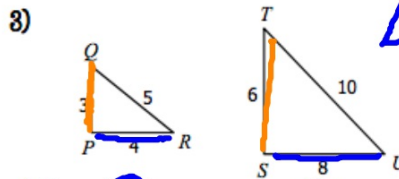


$$\triangle WVX \sim \triangle ZXY$$

SSS~ Side-Side-Side Similarity

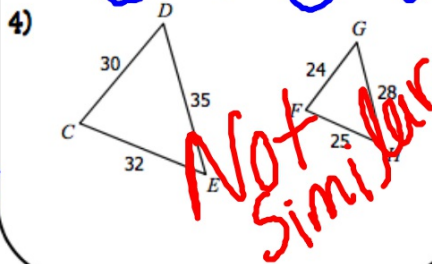
If all corresponding sides are **proportional**, then the triangles are similar.

Determine if the examples below are similar by SSS~. If yes, write a similarity statement.



$\triangle RPQ \sim \triangle UST$

$$\frac{5}{10} = \left(\frac{1}{2}\right) \quad \frac{3}{6} = \left(\frac{1}{2}\right) \quad \frac{4}{8} = \left(\frac{1}{2}\right)$$



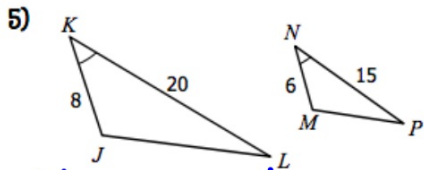
Not Similar

$$\frac{35}{28} =$$

SAS~ Side-Angle-Side Similarity

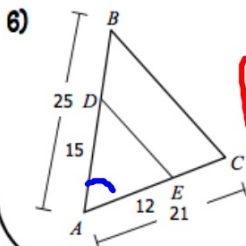
If two corresponding sides are proportional and the **included angles** are congruent, then the triangles are similar.

Determine if the examples below are similar by SAS~. If yes, write a similarity statement.



$$\frac{8}{6} = \frac{4}{3} \quad \frac{20}{15} = \frac{4}{3}$$

Yes $\Delta JKL \sim \Delta MNP$



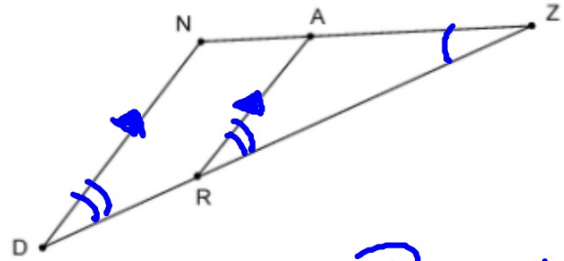
Not Similar

$$\frac{15}{25} = \frac{3}{5}$$

$$\frac{12}{21} = \frac{4}{7}$$

1. Given: $\overline{ND} \parallel \overline{AR}$

Prove: $\triangle NDZ \sim \triangle ARZ$ *Given*



$\overline{ND} \parallel \overline{AR}$

$\angle R \cong \angle D$

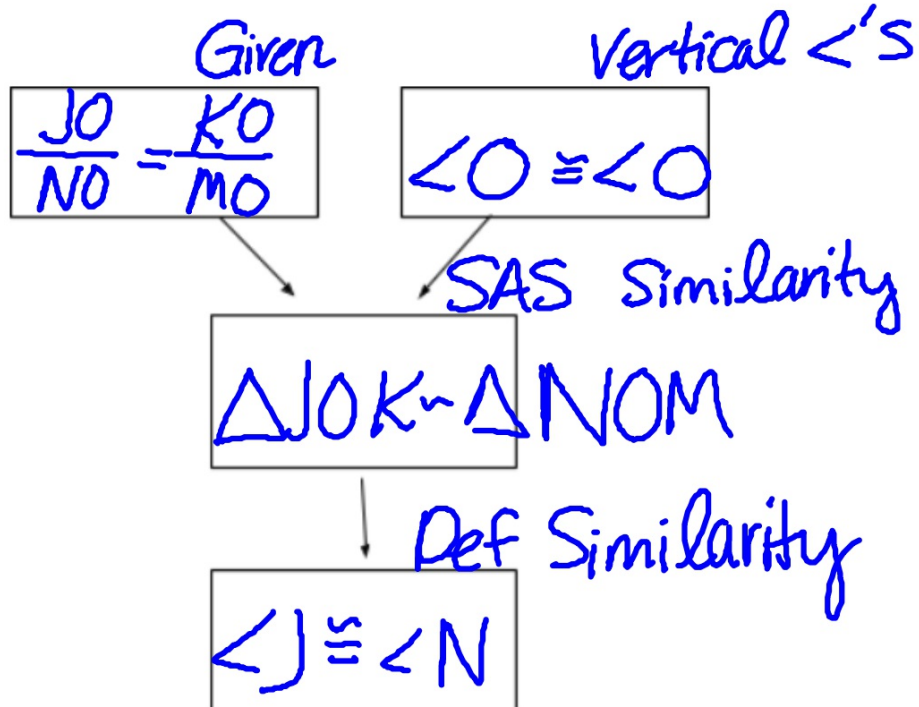
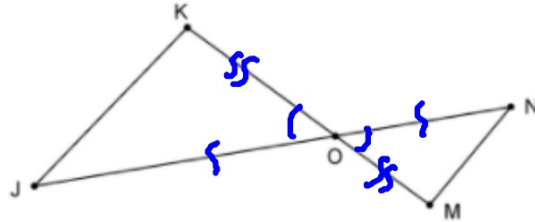
$\angle Z \cong \angle Z$

$\triangle NDZ \sim \triangle ARZ$

Corresponding \angle 's *Reflexive Property*
AA Similarity

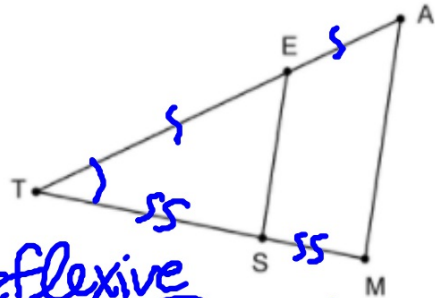
2. Given: $\frac{JO}{NO} = \frac{KO}{MO}$

Prove: $\angle J \cong \angle N$



3. Given: $\frac{TE}{TA} = \frac{TS}{TM}$

Prove: $\frac{TE}{TA} = \frac{SE}{MA}$



Given

$$\frac{TE}{TA} = \frac{TS}{TM}$$

Reflexive Property

$$\angle T \cong \angle T$$

SAS Similarity

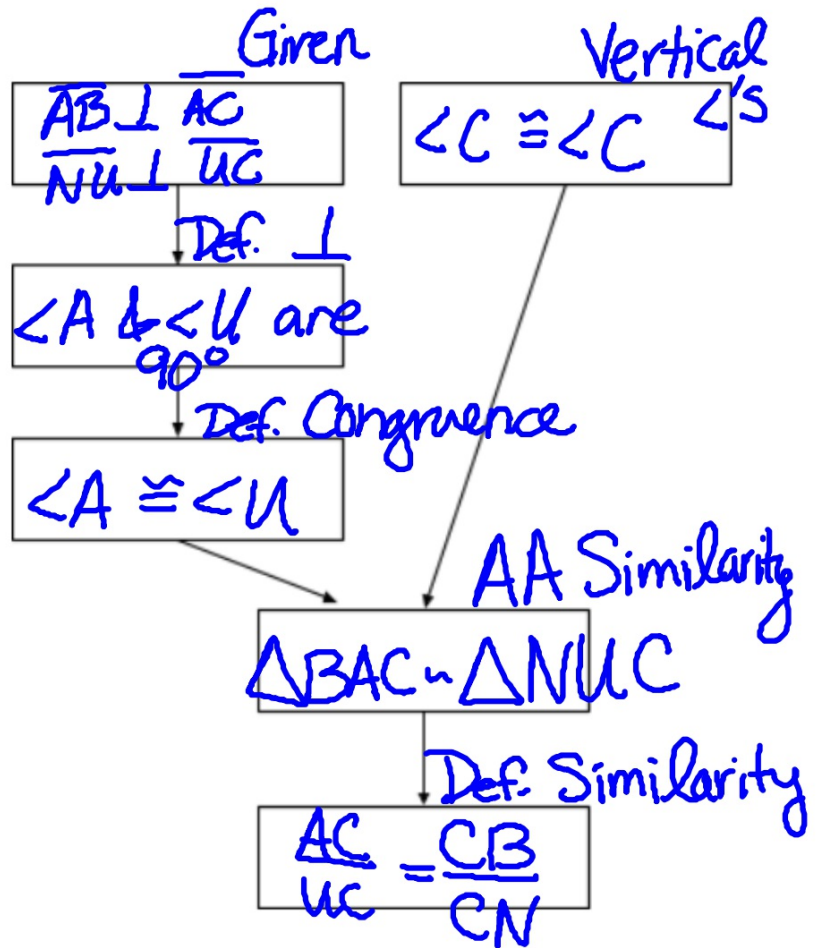
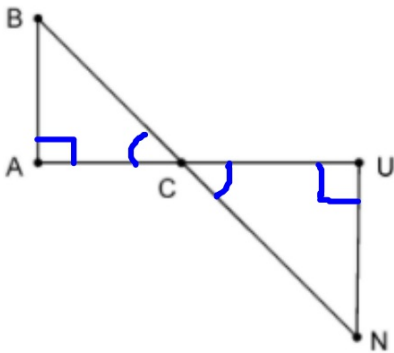
$$\triangle TES \sim \triangle TAM$$

Def. Similarity

$$\frac{TE}{TA} = \frac{SE}{MA}$$

4. Given: $\overline{AB} \perp \overline{AC}$
 $\overline{NU} \perp \overline{UC}$

Prove: $\frac{AC}{UC} = \frac{CB}{CN}$



Homework is Pages 5-6 in Packet