

Similar Triangles have: 1. Congruent, corresponding angles
 2. Proportional, corresponding sides

Triangles can be proved similar by:

1. AA~

2. SSS~

$$\frac{6}{4} = \frac{15}{10} = \frac{21}{14}$$

$$\downarrow \quad \downarrow \quad \downarrow$$

$$\frac{3}{2} = \frac{3}{2} = \frac{3}{2}$$

3. SAS~

$$\frac{3}{6} = \frac{4}{8}$$

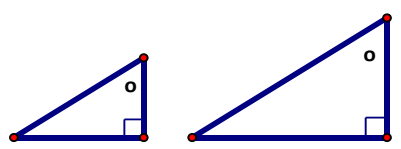
$$\downarrow \quad \downarrow$$

$$\frac{1}{2} = \frac{1}{2}$$

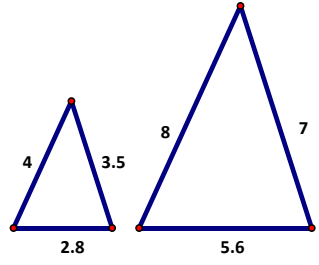
Right \angle 's \cong

Using the theorems: Are the following pairs of triangles similar?
 If they are, then name their similarity criteria. (SSS~, SAS~, AA~)

a) Yes / No AA~



b) Yes / No SSS~

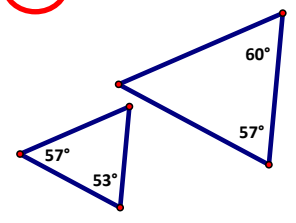


$$\frac{4}{8} = \frac{1}{2}$$

$$\frac{2.8}{5.6} = \frac{1}{2}$$

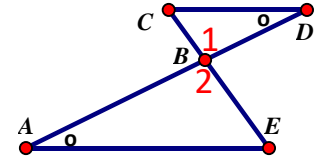
$$\frac{3.5}{7} = \frac{1}{2}$$

c) Yes / No _____



Given: $\angle A \cong \angle D$

Prove: $\triangle ABE \sim \triangle DBC$



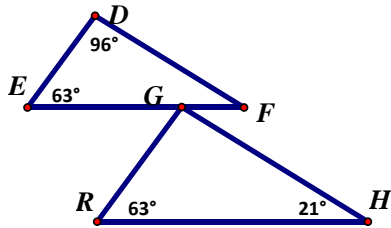
STATEMENTS	REASONS
1) $\angle A \cong \angle D$	1) Given
2) $\angle 1 \cong \angle 2$	2) Vertical angles thm.
3) $\triangle ABE \sim \triangle DBC$	3) AA~

Are the following pairs of triangle similar? If YES, name the similarity criteria (SSS~, SAS~, AA~) and create a similarity statement. If NO, just circle No.

a) **Yes** / No

Criteria AA~

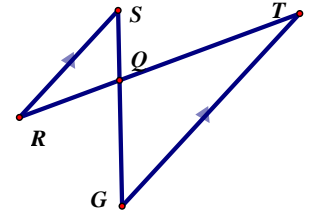
$\triangle DEF \sim \triangle GRH$



b) **Yes** / No

Criteria AA~

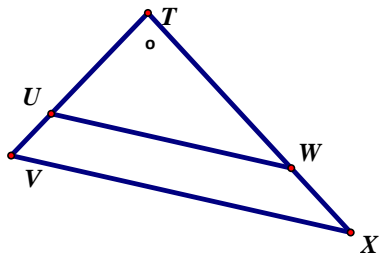
$\triangle RSQ \sim \triangle TGO$



c) Yes / **No**

Criteria _____

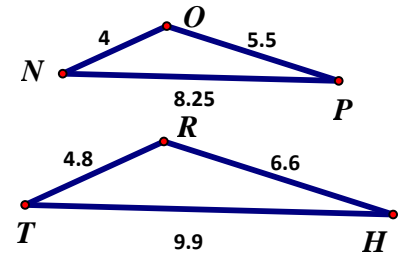
$\triangle _____ \sim \triangle _____$



d) **Yes** / No

Criteria SSS~

$\triangle PON \sim \triangle HRT$



$$\frac{4}{4.8} = \frac{5.5}{6.6} = \frac{8.25}{9.9} = \frac{5}{6}$$

• If $\overline{UW} \parallel \overline{VX}$ then yes, but not given

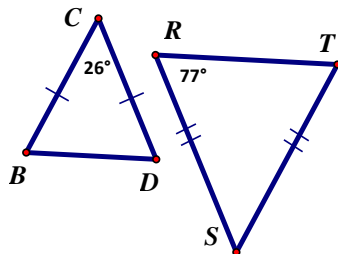
e) **Yes** / No

Criteria AA~

$\triangle BCD \sim \triangle TSR$

or

$\triangle BCD \sim \triangle RST$



f) **Yes** / No

Criteria AA~

$\triangle EFG \sim \triangle GHE$

