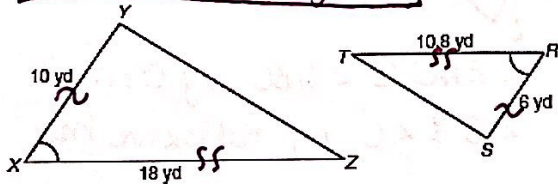


Day 2 – Similar Triangle Theorems – Practice

1. Prove whether the following figures are similar using a similarity postulate (with proof). Then create a similarity statement.

A. $\triangle XYZ \sim \triangle SRT$ by SAS

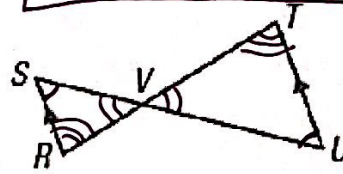


$$\frac{XY}{RS} = \frac{XZ}{TR}$$

$$\frac{10}{6} = \frac{18}{10.8} \quad \angle X \cong \angle R$$

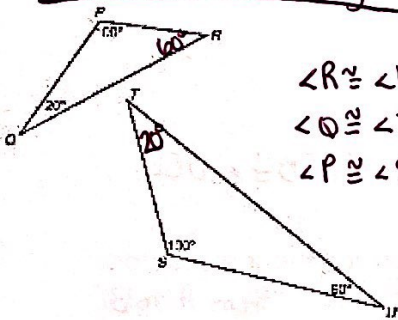
$$1.\bar{6} = 1.\bar{6}$$

B. $\triangle SVR \sim \triangle UVT$ by AA



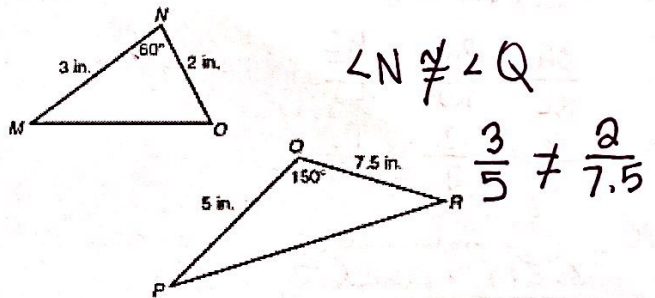
$\angle S \cong \angle U$ by Alternate Int \angle 's
 $\angle R \cong \angle T$ by Alternate Int \angle 's
 $\triangle SVR \cong \triangle UVT$ by Vertical \angle 's

C. $\triangle QPR \sim \triangle TSU$ by AA



$\angle R \cong \angle U$
 $\angle Q \cong \angle T$
 $\angle P \cong \angle S$

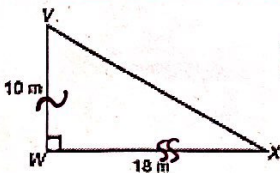
D. Not Similar



$\angle N \neq \angle Q$

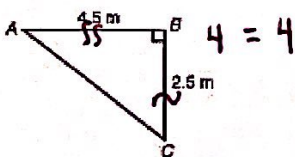
$$\frac{3}{5} \neq \frac{2}{7.5}$$

E. $\triangle VWX \sim \triangle CBA$ by SAS

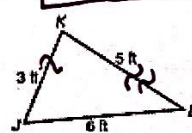


$$\frac{VW}{BC} = \frac{WX}{AB}$$

$$\frac{10}{2.5} = \frac{18}{4.5} \quad \angle W \cong \angle B$$

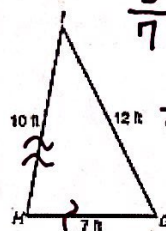


F. Not Similar



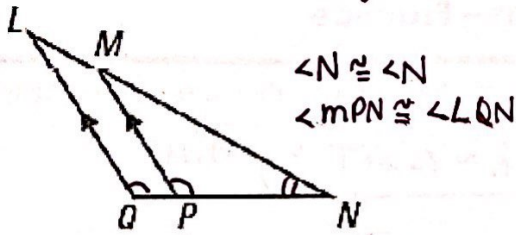
$$\frac{KJ}{HG} = \frac{KL}{IH} = \frac{JL}{GI}$$

$$\frac{3}{7} = \frac{5}{10} = \frac{6}{12}$$

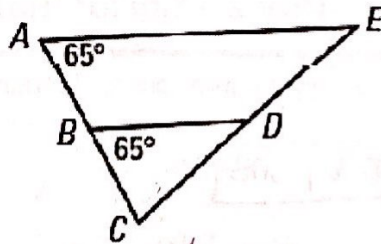


$$\frac{3}{7} \neq \frac{1}{2} = \frac{1}{2}$$

G. $\triangle LQN \sim \triangle MPN$ by AA

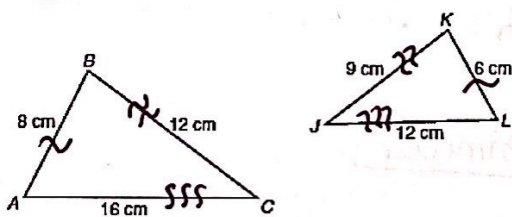


H. $\triangle ACE \sim \triangle BCD$ by AA



$\angle EAC \cong \angle DBC$ by Corr. \angle 's
 $\angle C \cong \angle C$ by Reflexive Prop

I. $\triangle ABC \sim \triangle LKJ$ by SSS

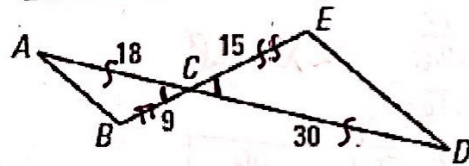


$$\frac{BA}{KL} = \frac{BC}{KJ} = \frac{AC}{LJ}$$

$$\frac{8}{6} = \frac{12}{9} = \frac{16}{12}$$

$$1.\bar{3} = 1.\bar{3} = 1.\bar{3}$$

J. $\triangle ACB \sim \triangle DCE$ by SAS



$$\frac{BC}{EC} = \frac{AC}{DC}$$

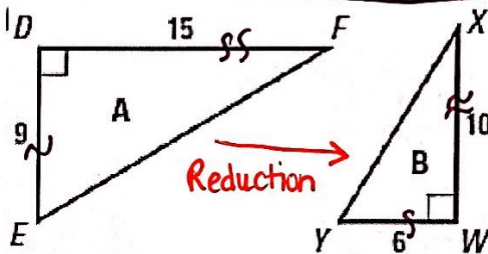
$$\frac{9}{15} = \frac{18}{30}$$

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

$\angle ACB \cong \angle DCE$

2. Determine if the following triangles are similar and if so, by what theorem. Then find the scale factor.

A. $\triangle EDF \sim \triangle ywx$ by SAS



$$\frac{DE}{yw} = \frac{DF}{xw}$$

$$\frac{9}{6} = \frac{15}{10}$$

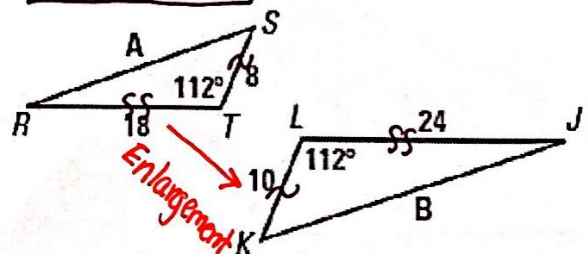
$$1.5 = 1.5$$

Scale Factor:

$$\frac{6}{9} = \frac{2}{3}$$

$\angle D \cong \angle W$

B. Not Similar from A to B



$$\frac{ST}{LK} = \frac{RT}{LJ}$$

$$\frac{8}{10} = \frac{18}{24}$$

$$.8 \neq .75$$