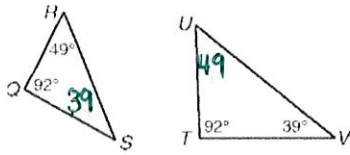


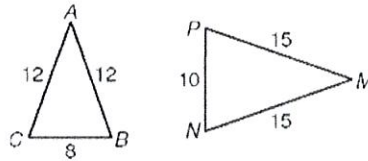
### Day 3 – Proving Triangles Similar

Explain why the triangles are similar (SSS~, SAS~, or AA~) and write a similarity statement.

1)  $\triangle RQS \sim \triangle UTV$  by AA~



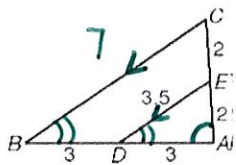
2)  $\triangle ABC \sim \triangle MNP$  by SSS~



$$\frac{12}{15} = \frac{8}{10} = \frac{12}{15}$$

$$\frac{4}{5} = \frac{4}{5} = \frac{4}{5}$$

3)  $\triangle ADE \sim \triangle ABC$  by AA~

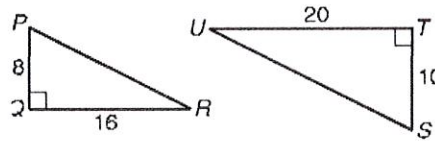


OR  
SAS~  
OR  
SSS~

$$\frac{2}{4} = \frac{3}{6} = \frac{3.5}{7}$$

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

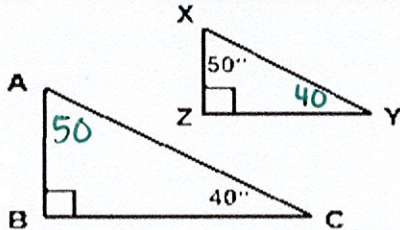
4)  $\triangle QPR \sim \triangle TSU$  by SAS~



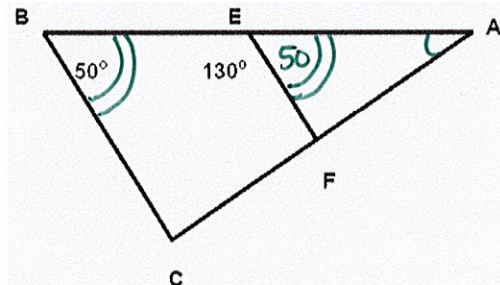
$$\frac{8}{10} = \frac{16}{20}$$

$$\frac{4}{5} = \frac{4}{5}$$

5)  $\triangle ABC \sim \triangle XZY$  by AA~

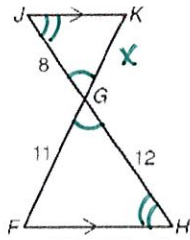


6)  $\triangle AEF \sim \triangle ABC$  by AA~



Explain why the triangles are similar (SSS~, SAS~, or AA~) and find each length.

9) Similar by AA~ and GK = 7.3

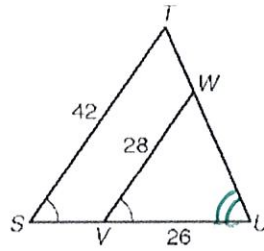


$$\frac{8}{12} = \frac{x}{11}$$

$$12x = 88$$

$$x = \frac{88}{12} = \frac{22}{3} = 7.\bar{3}$$

10) Similar by AA~ and SU = 39

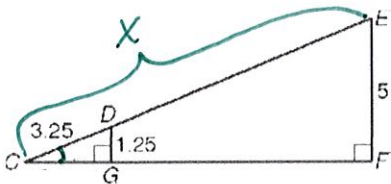


$$\frac{28}{42} = \frac{26}{x}$$

$$28x = 1092$$

$$x = 39$$

11) Similar by AA~ and DE = 9.75



$$\frac{3.25}{x} = \frac{1.25}{5}$$

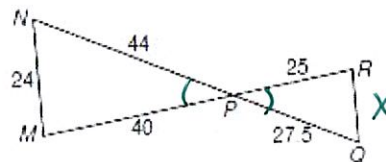
$$1.25x = 16.25$$

$$x = 13$$

$$DE + 3.25 = 13$$

$$DE = 9.75$$

12) Similar by SAS~ and RQ = 15



$$\frac{27.5}{44} = \frac{25}{40}$$

$$\frac{5}{8} = \frac{5}{8}$$

$$\frac{25}{40} = \frac{x}{24}$$

$$40x = 600$$

$$x = 15$$