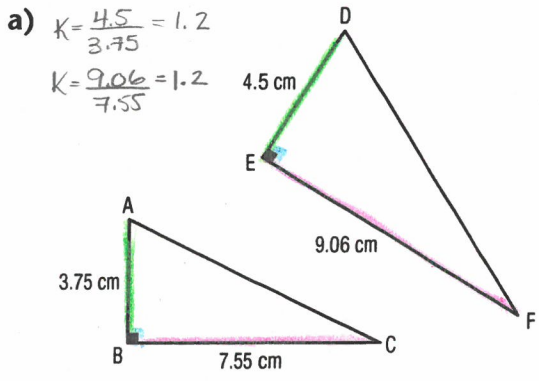
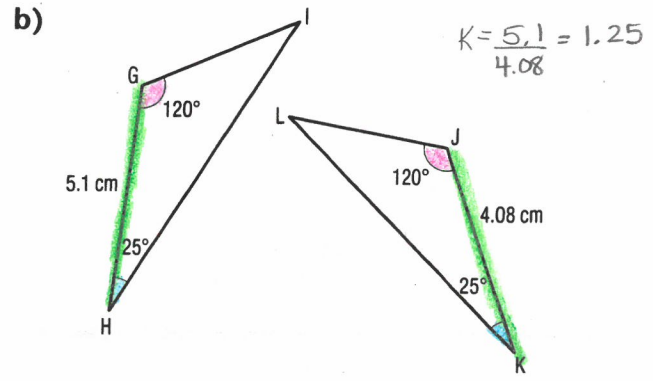


### Similar triangles

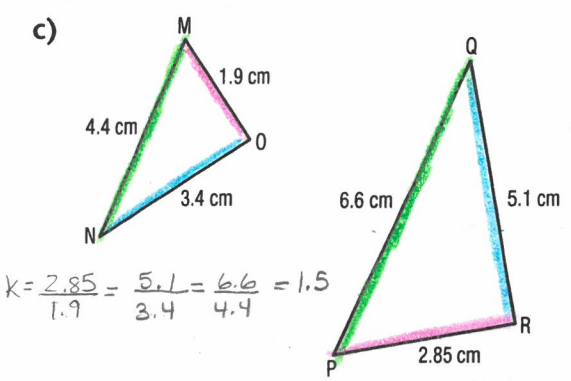
**1** For each case, identify the geometric statement which allows you to conclude that the two triangles are similar.



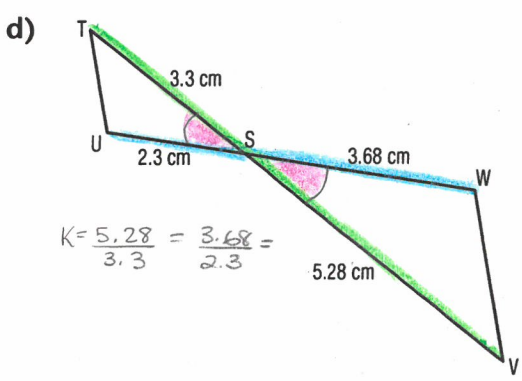
$\triangle ABC \cong \triangle DEF$  because of SAS



$\triangle GHI \cong \triangle JKL$  because of ASA

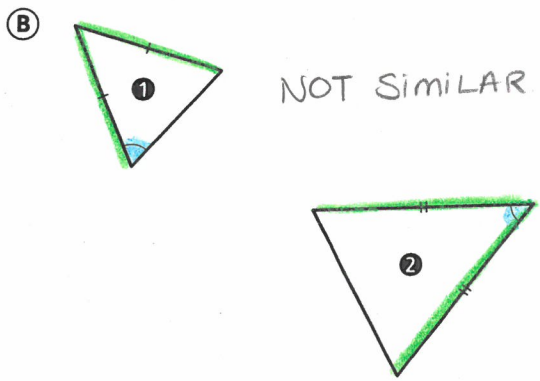
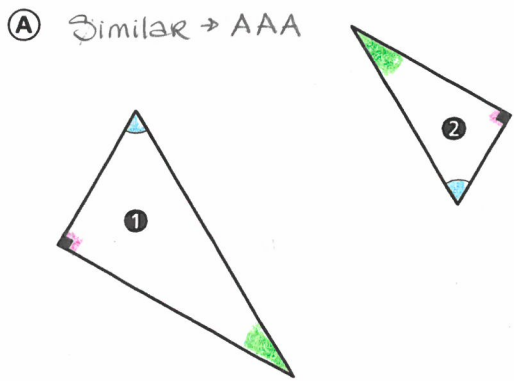


$\triangle MNO \cong \triangle PQR$  because of SSS



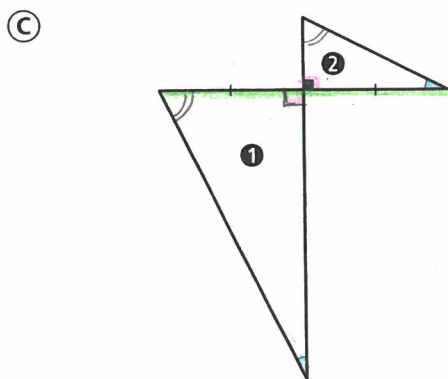
$\angle TSU \cong \angle VSW$  vertically opposite  
 $\triangle TSU \cong \triangle VSW$  because of SAS

**2** Among the following pairs of triangles, identify which pairs are similar.

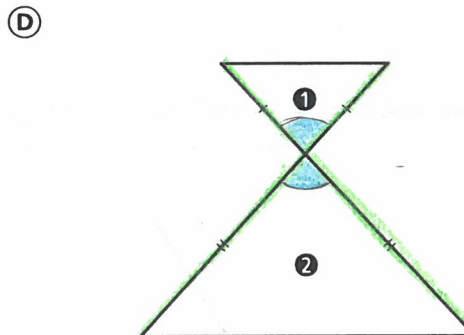


Name: Answer Key

Group: \_\_\_\_\_ Date: \_\_\_\_\_



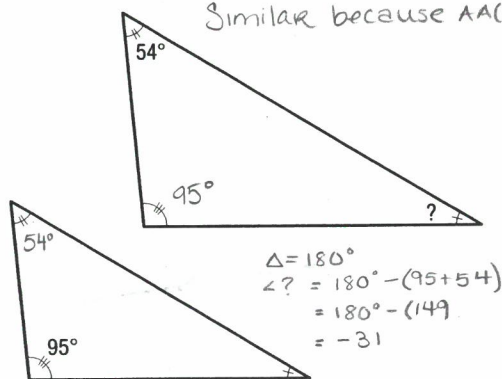
Similar  $\rightarrow$  ASA or AAA



Similar  $\rightarrow$  SAS.

**3** For each case, identify the missing value.

a) Similar because AA(A) b)



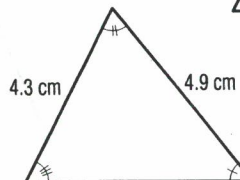
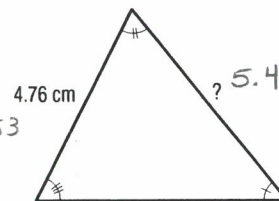
$$\begin{aligned} \Delta &= 180^\circ \\ \angle ? &= 180^\circ - (95 + 54) \\ &= 180^\circ - (149) \\ &= 31 \end{aligned}$$

$\angle ? = 31^\circ$

$$k = \frac{4.7}{4.3} = 1.10697674...$$

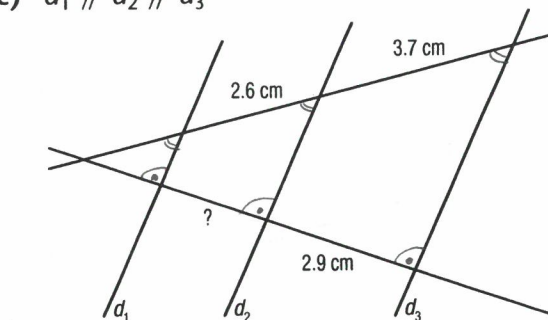
$$\frac{4.7}{4.3} = \frac{x}{4.9}$$

$$\begin{aligned} x &= 5.355813953 \\ x &= 5.4 \end{aligned}$$



$\angle ? = 5.4$

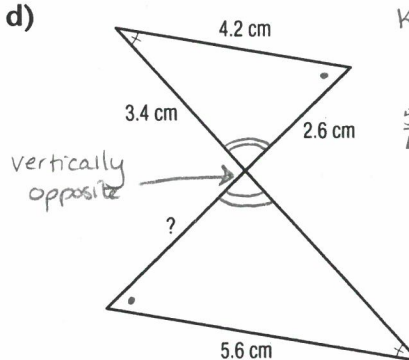
c)  $d_1 \parallel d_2 \parallel d_3$



$$k = \frac{3.7}{2.9} \quad \frac{3.7}{2.9} = \frac{2.6}{x} \quad x = 2.037837838$$

$? = 2.04 \text{ cm}$

d)



$$k = \frac{5.6}{4.2}$$

$$\begin{aligned} \frac{5.6}{4.2} &= \frac{x}{2.6} \\ x &= 3.46 \end{aligned}$$

$? = 3.47 \text{ cm}$