

Triangle Congruence Conditions Toolkit

SAS \cong
side-angle-side

1. Similar by SAS~

2. Common ratio (zoom factor)
 $\frac{AC}{DF} = 1$ and $\frac{AB}{DE} = 1$

SSS \cong
side-side-side

1. SSS~

2. $\frac{a}{a} = 1, \frac{b}{b} = 1, \text{ and } \frac{c}{c} = 1$

HL \cong
hypotenuse-leg

1. SSS~ or SAS~ (use Pythagorean Theorem to find the last set of sides)

2. $\frac{l}{l} = 1, \frac{h}{h} = 1, \text{ and } \frac{x}{x} = 1$

AAS \cong
angle-angle-side

1. AA~

2. Corresponding sides have a common ratio of 1.

ASA \cong
angle-side-angle

1. AA~

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

~~SSA~~

1. Not similar

CAN'T DO!

~~AA~~

1. AA~

2. No sides are given

CAN'T DO!

