Name _____

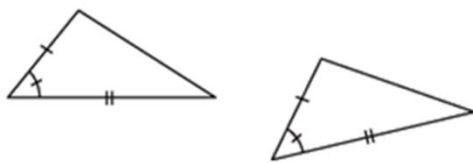# TRIANGLE CONGRUENCE TOOLKIT

SAS≅
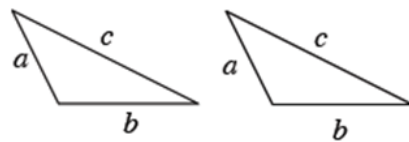
(2 sides and the angle between them)

Why does this work?

* Δ's are ~ by SAS~

* zf = 1 (tick marks tell us that the
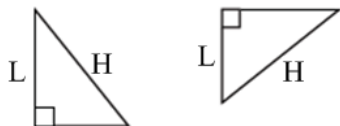
 sides are ≅, making the zf = 1)

SSS≅

(3 sides)

Why does this work?

* Δ's are ~ by SSS~

* zf = 1 ($a = a$, $b = b$, $c = c$

 so $\frac{a}{a} = 1$, $\frac{b}{b} = 1$, and $\frac{c}{c} = 1$)

HL≅
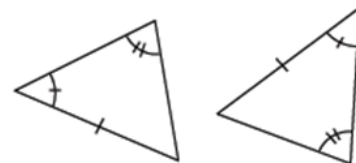
(hypotenuse-leg; ONLY for right Δ's)

Why does this work?

* Pythagorean Theorem gives us

 the 3rd sides, THEN…

* Δ's are ~ by SSS~ or SAS~

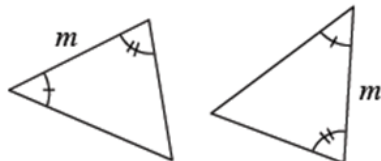* zf = 1 (because $\frac{H}{H} = 1$ and $\frac{L}{L} = 1$)

AAS≅

(2 angles and the corresponding

side that is not between the angles)

Why does this work?

* Δ's are ~ by AA~

* zf = 1 (tick marks tell us this…)

ASA≅

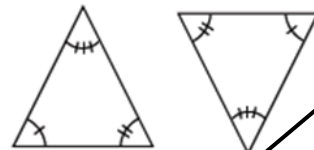(2 angles and the side between them)

Why does this work?

* Δ's are ~ by AA~

* zf = 1 (because $\frac{m}{m} = 1$)

AA or AAA

Δ ~ only!

NOT FOR Δ ≅ !

Δ's are ~ by AA~

But, no zf…

(sides?)

NO! NO!

SSA or ASS

NOT FOR Δ ~ OR Δ ≅ !

Can't even prove the Δ's are ~