

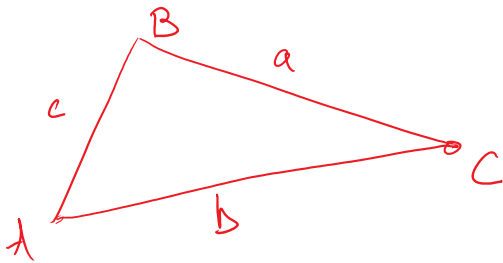
Prove Δ 's \cong

- SSS
- SAS
- ASA
- AAS
- ~~AAA~~

Not Proving \cong

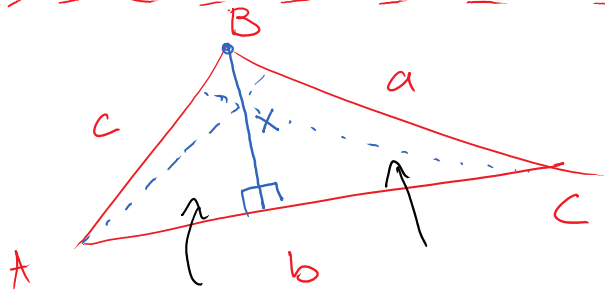
- ASS/SSA
- ~~AAA~~

5.5 Using Law of Sines (Non Rt. Δ 's)



upper case: Angles

Lower case: sides



Proof

$$\frac{c \cdot \sin A}{c} = \frac{a \cdot \sin C}{a}$$

$$c \cdot \sin A = \frac{x}{c} \cdot c \cdot \sin C = \frac{x}{a} \cdot a$$

$$c \cdot \sin A = x \quad a \cdot \sin C = x$$

$$\frac{\sin A}{a} = \frac{\sin C}{c} = \frac{\sin B}{b}$$

$$\star \frac{a}{\sin A} = \frac{c}{\sin C} = \frac{b}{\sin B} \star$$

• When do I use the Law of sines

1) Not Rt. Δ

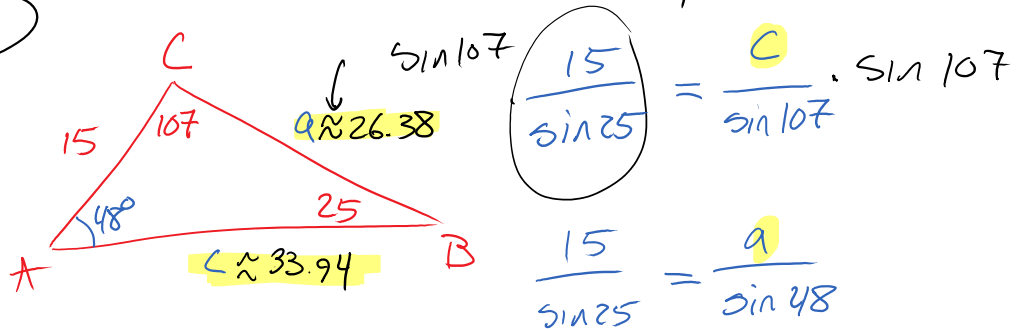
2) only given:

- A) AAS
- B) ASA

* C) SSA \rightarrow 0, 1, or 2 Δ 's

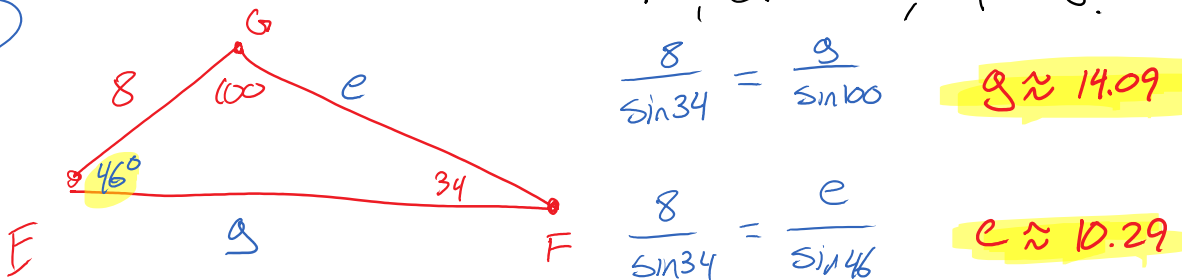
① ΔABC with $C = 107^\circ$, $B = 25^\circ$, $b = 15$

AAS



② solve ΔEFG with $F = 34^\circ$, $G = 100^\circ$, $f = 8$.

AAS



③ ΔJKL with $J = 51^\circ$, $K = 44^\circ$, $l = 11$

ASA

