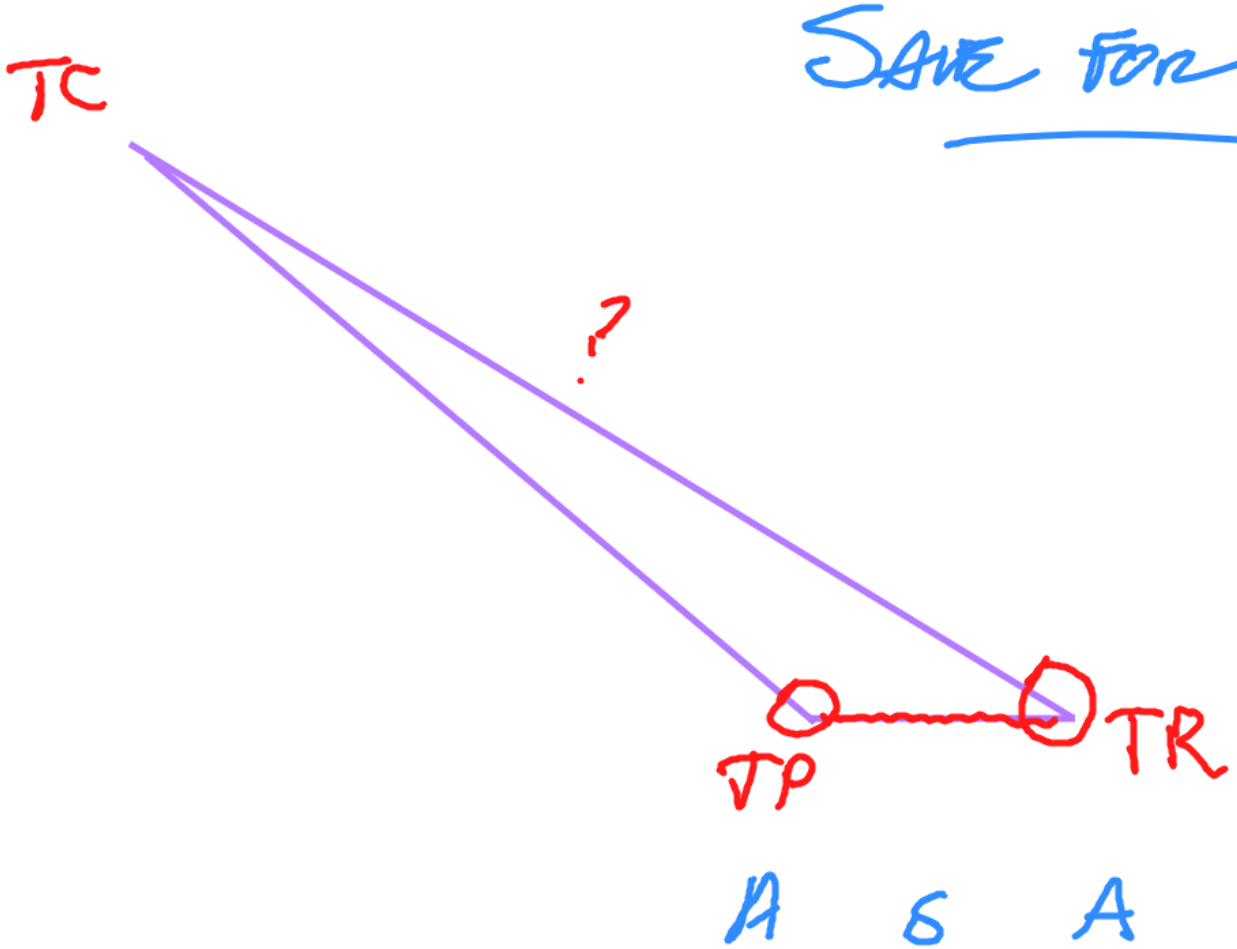
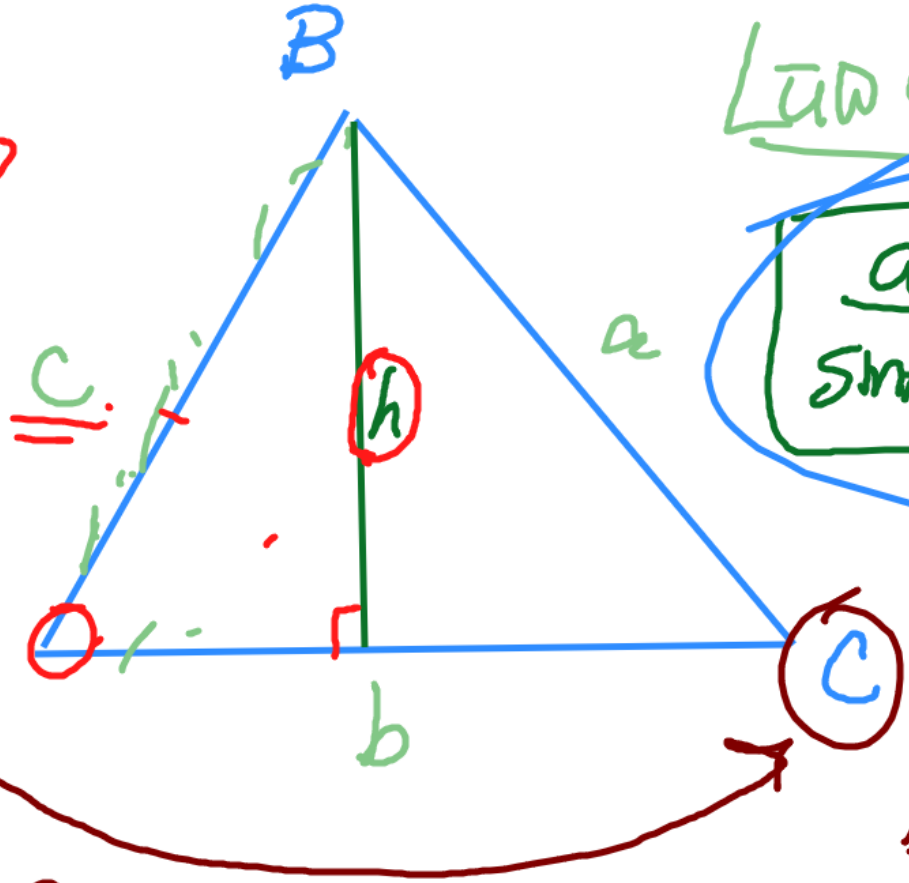
Chapter 6: Additional Topics in Trig

SAVE FOR THURSDAY



$\sin A = \frac{h}{c}$

$h = c \cdot \sin A$



Law of Sines

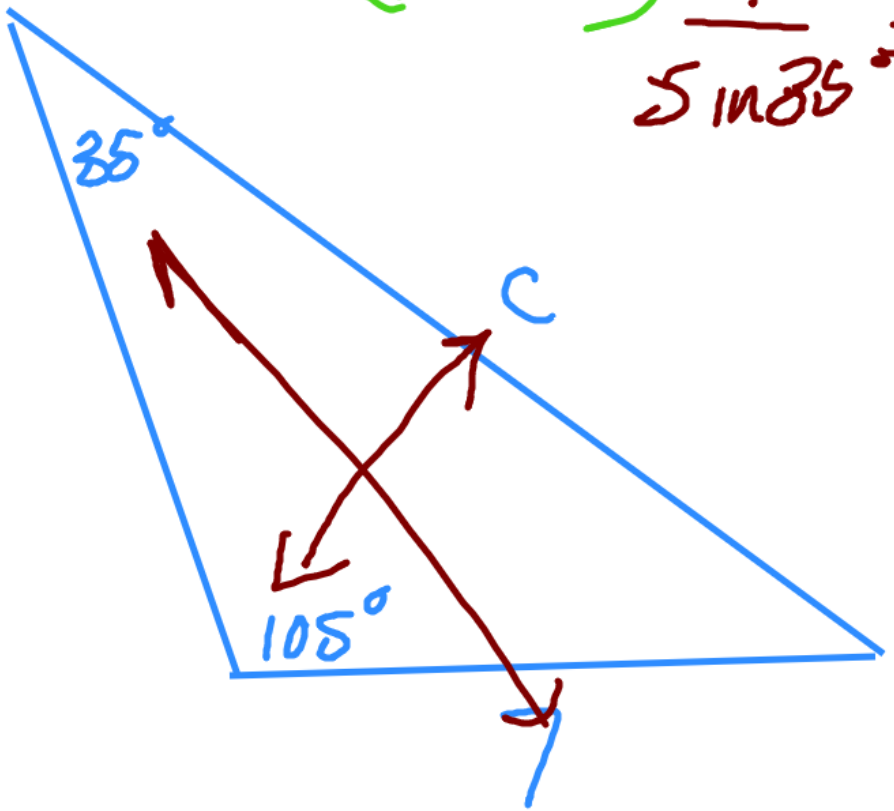
$$\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$

$\sin C = \frac{h}{a}$

$h = a \sin C$

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

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

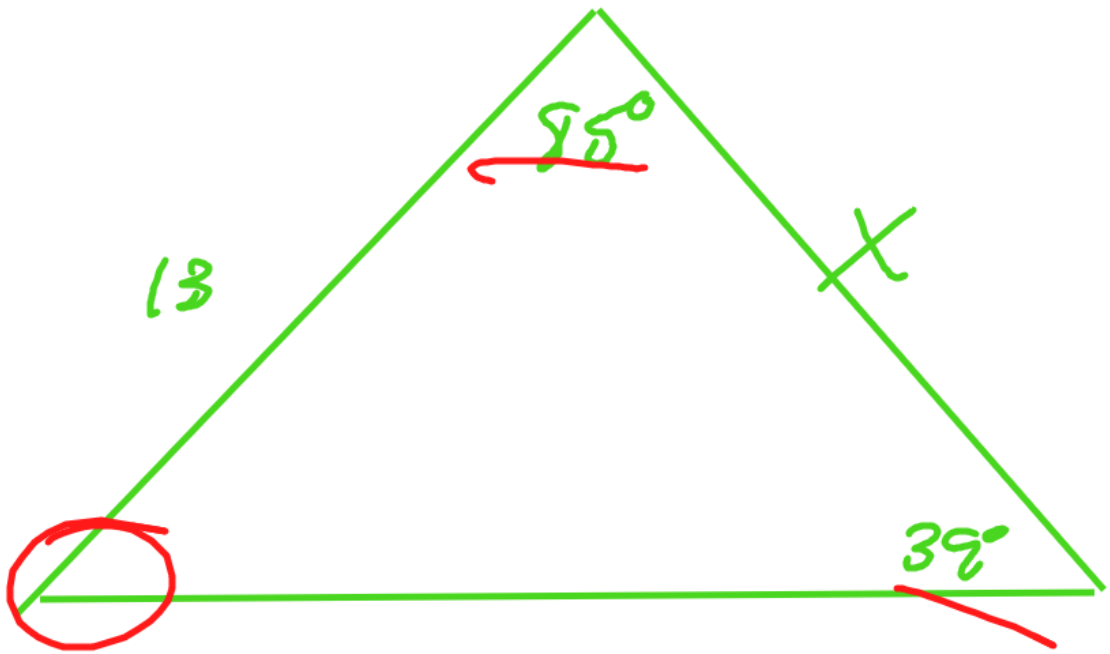


$(\sin 105^\circ)\dfrac{7}{\sin 35^\circ} = \dfrac{c}{\sin 105^\circ}(\sin 105^\circ)$

$c = 11.788$

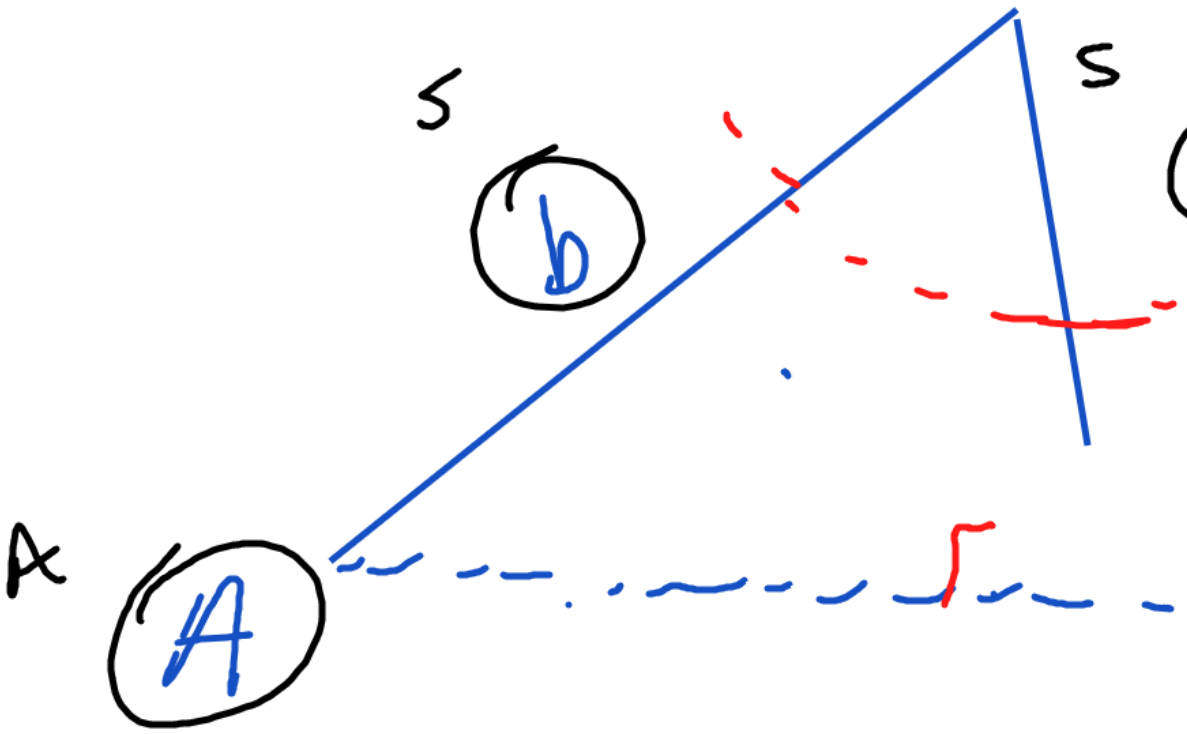
$$\frac{X}{\sin 86} = \frac{13}{\sin 39}$$

$X = 14.86$



ASA AAS SAS SSS

SSA - Ambiguous Case



Case 1: Right Δ

$\sin A = \frac{a}{b}$

$\therefore$ $a = b \sin A$

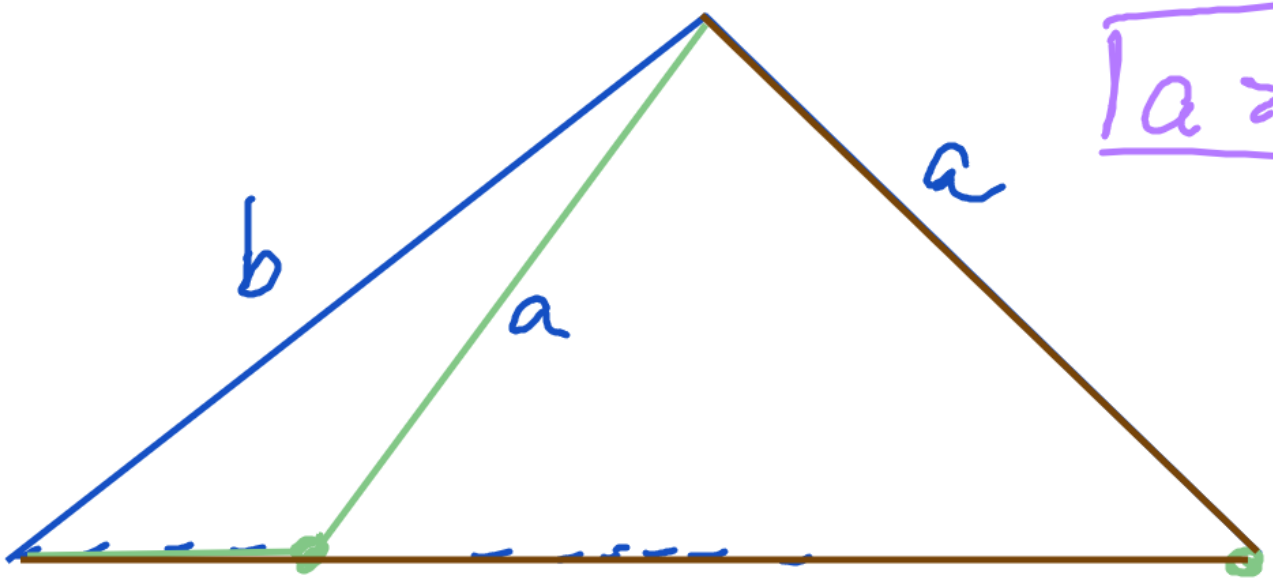
Case 2: a is too short

$a < b \sin A$

"the dangler"

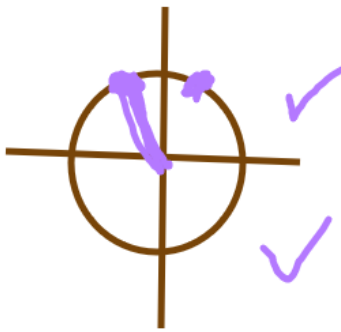
Case 3: a is too long

$a \geq b \sin A$



16 vs $10\sin 38°$

5.45



A

$\Rightarrow \sin x = .9076$

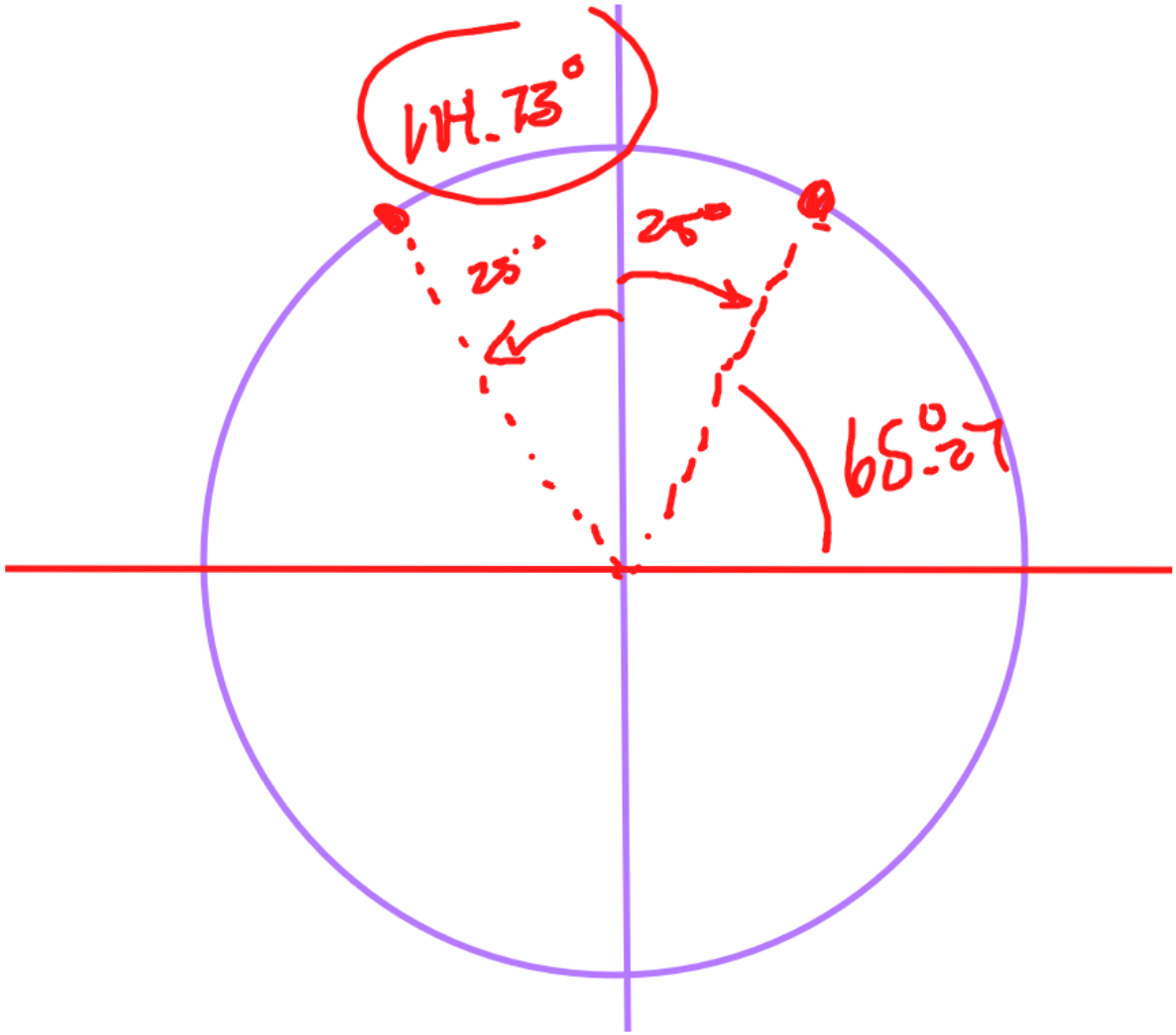
$\frac{6}{\sin 33} = \frac{10}{\sin x}$

$\frac{6\sin x}{6} = \frac{10\sin 33}{6}$

$\sin x = \frac{5.45}{6}$

$x = \sin^{-1}\left(\frac{5.45}{6}\right)$

$= 65.27°$


VH. 73°
25°
25°
65°-27

6.1A p406 4-36(x4)

6.1B Law of Sines

6.1C → Thursday — Applications