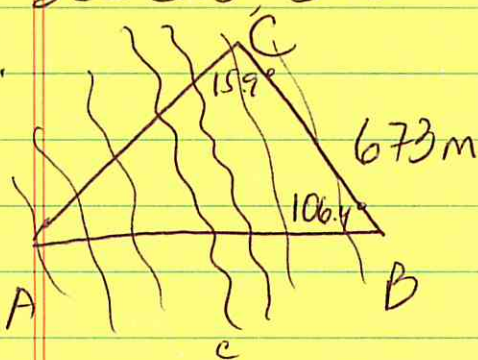


TIPC Final Exam Review Sec 5.5, 5.6

2.



ASA - Law of Sines

$$\angle A = 180 - 106.4 - 15.9 = 57.7^\circ$$

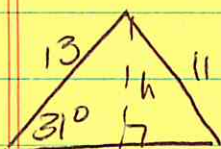
$$\frac{\sin 57.7}{673} = \frac{\sin 15.9}{c}$$

$$c = \frac{673 \sin 15.9}{\sin 57.7}$$

$$c \approx 218.127$$

It's about 218.127 m across the river

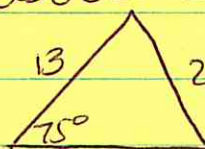
3.



$$h = 13 \sin 31 < 11 < 13$$

2 Δ 's

4.

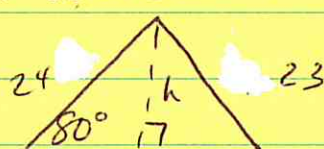


$b > a$

(opp > adj)

one Δ

5.

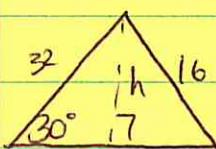


$$h = 24 \sin 80^\circ$$

$$h = 23.635$$

$h > a$ NO Δ

6.



$$h = 32 \sin 30$$

$$h = 32 \left(\frac{1}{2}\right) = 16$$

$h = a$ 1 Δ

7.



$$h = 15 \sin 59 \approx 12. \dots$$

$$15 \sin 59 < 14 < 15$$

2 Δ 's

Acute Δ

$$\frac{\sin 59}{14} = \frac{\sin B_1}{15}$$

$$\sin B_1 = \frac{15 \sin 59}{14}$$

$$m\angle B_1 \approx 66.7^\circ$$

$$m\angle C_1 = 180 - 59 - 66.7 = 54.3^\circ$$

$$\frac{\sin 59}{14} = \frac{\sin 54.3}{c_1}$$

$$c_1 = \frac{14 \sin 54.3}{\sin 59} \approx 13.264$$

Obtuse Δ

$$\angle B_2 = 180 - 66.7 = 113.3^\circ$$

$$\angle C_2 = 180 - 113.3 - 59 = 7.7^\circ$$

$$\frac{\sin 59}{14} = \frac{\sin 7.7}{c_2}$$

$$c_2 = \frac{14 \sin 7.7}{\sin 59}$$

$$c_2 \approx 2.188$$