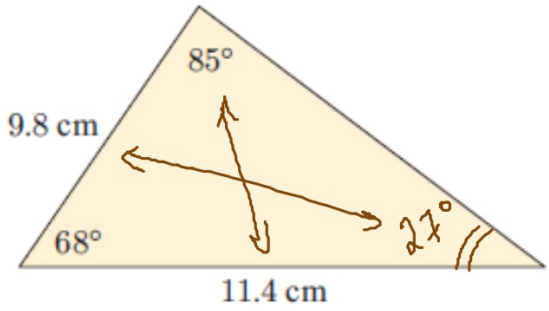
03/06/2019 ***15J Extention*** ***page 476 -478***

HW #4,1, (2,3)

4 Is it possible to have a triangle with the measurements shown? Explain your answer.



1) $85^\circ + 68^\circ = 153^\circ$

2) $180^\circ - 153^\circ = 27^\circ$

3) $\frac{\sin 85^\circ}{11.4} \stackrel{?}{=} \frac{\sin 27^\circ}{9.8}$

$0.08738 \stackrel{?}{\neq} 0.04632$

$\therefore$ It is not possible

1 Triangle ABC has angle $B = 40°$, $b = 8$ cm, and $c = 11$ cm. Find the two possible values for angle C.

1) $\frac{\sin C}{11} = \frac{\sin 40°}{8}$

$\sin C = \frac{11 \cdot \sin 40°}{8}$

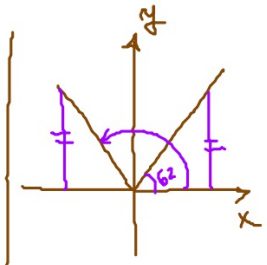
$\sin C \approx .8838$

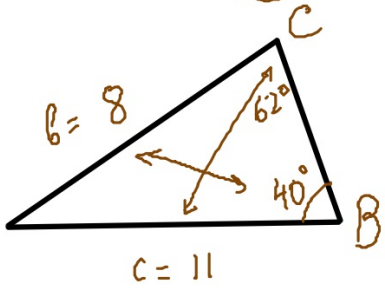
$\sin^{-1}(.8838) = 62.10...$

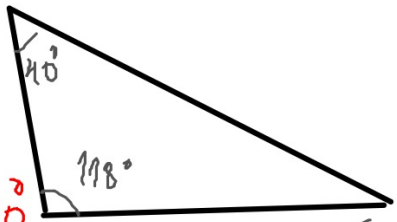
$\therefore C_1 \approx 62°$

$180° - 62° = 118°$

$C_2 = 118°$







① $40°, 62°, 78° = 180°$

② $40°, 118°, 22° = 180°$

$\sin 62° = .8829$

$\sin 118° = .8829$

1 Triangle ABC has angle $B = 40°$, $b = 8$ cm, and $c = 11$ cm. Find the two possible values for angle C.

4 Is it possible to have a triangle with the measurements shown? Explain your answer.