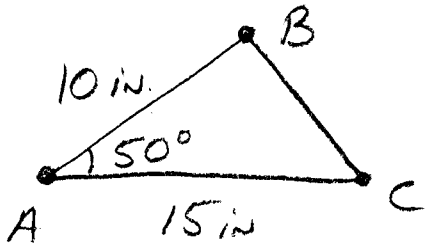
Alg. 2 - BE | Wednesday 1-19-11

① State (from memory) the formula for the Area of any triangle that uses the Sin and the Law of Sines.

- Homework Review Pg. 730 #1-7

Pg. 730

④ Area to nearest tenth:

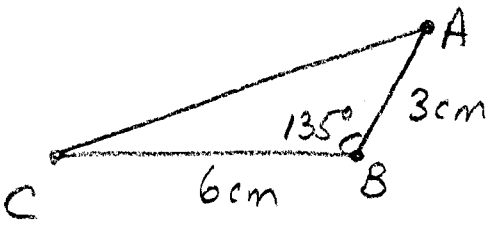


$\sin 50° = .7660$

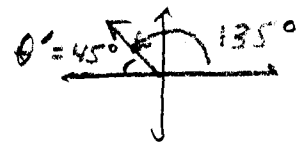
$A = \frac{1}{2}(10)(15)\sin 50$

$= 75(.7660) \cong 57.45 \cong \boxed{57.5 \text{ in}^2}$

⑤



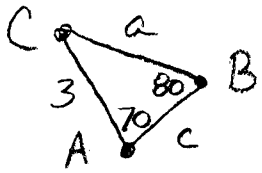
$\sin 135 = \sin 45 = .7071$



$A = \frac{1}{2}(6)(3)\sin 135°$

$= 9(.7071) \cong 6.36 \cong \boxed{6.4 \text{ cm}^2}$

⑥ Solve to nearest tenth & degree



$m\angle C = 180° - 80° - 70° = \boxed{30° = m\angle C}$

$\frac{\sin 80}{3} = \frac{\sin 70}{a} \quad \therefore a = \sin 70\left(\frac{3}{\sin 80}\right)$

$a = .9397\left(\frac{3}{.9848}\right)$

$\boxed{a \cong 2.9}$

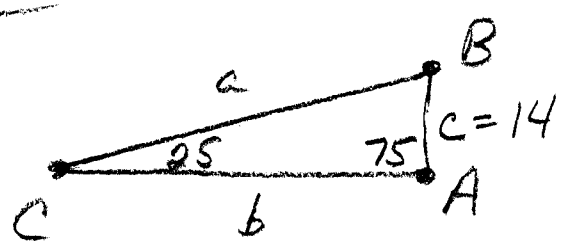
$\frac{\sin 80}{3} = \frac{\sin 30}{c} \quad \therefore c = \sin 30\left(\frac{3}{\sin 80}\right)$

$c = .5\left(\frac{3}{.9848}\right)$

$\boxed{c \cong 1.5}$

Pg 730

(7)



$m\angle B = 180 - 100$

$\boxed{m\angle B = 80°}$

$$\frac{\sin 25°}{14} = \frac{\sin 80°}{b} \quad \therefore b = \sin 80° \left(\frac{14}{\sin 25°}\right)$$

$$b = .9848\left(\frac{14}{.4226}\right)$$

$\boxed{b = 32.6}$

$$\frac{\sin 25°}{14} = \frac{\sin 75°}{a} \quad \therefore a = \sin 75° \left(\frac{14}{\sin 25°}\right)$$

$$a = .9659\left(\frac{14}{.4226}\right)$$

$\boxed{a \tilde{=} 32.0}$

IGW ⇒ @ 3 HW 2