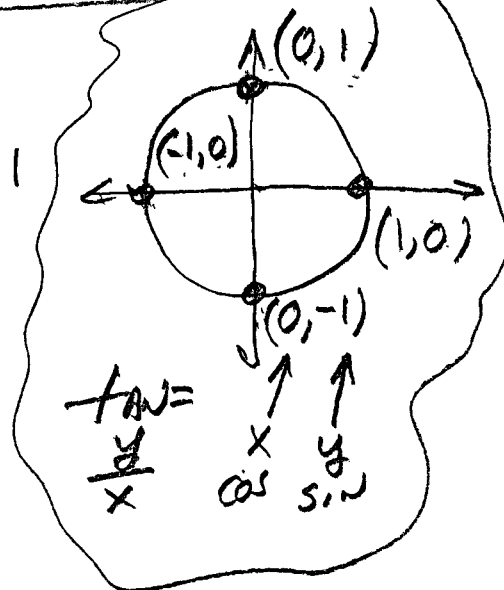
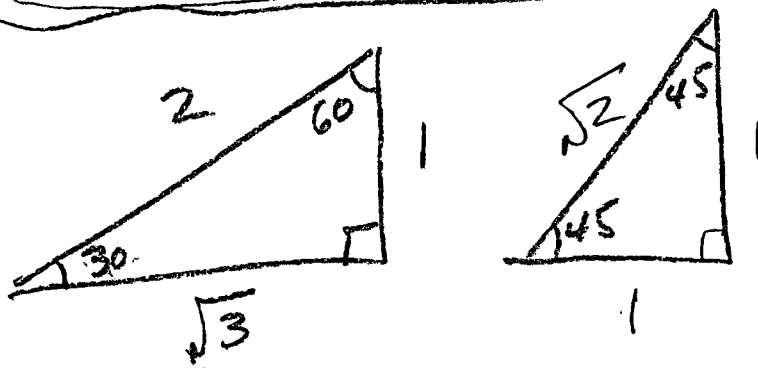


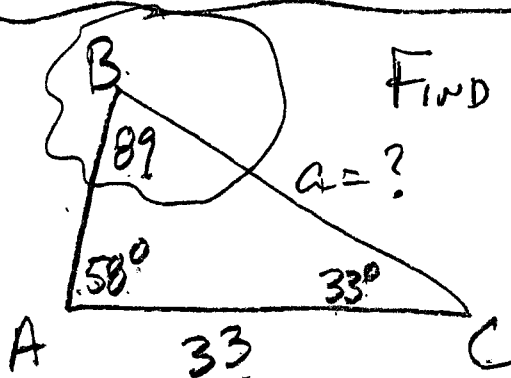
Geometry

Tues. 12-11-12

CLASS NOTES



(17.)



Find $BC = a = ?$

ASA $\Rightarrow$ LOS

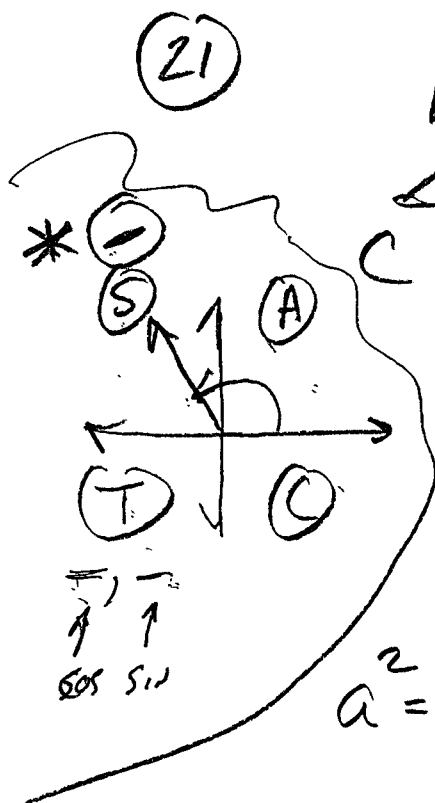
$$\frac{\sin A}{a} = \frac{\sin B}{b} = \frac{\sin C}{c}$$

~~$$\frac{\sin 89}{33} = \frac{\sin 58}{a}$$~~

~~$$a \sin 89 = \frac{33 \sin 58}{\sin 89}$$~~

$$a = \frac{33(0.8480)}{(0.9998)} = 27.9896$$

$$a = 28.0$$



FIND BC

SAS $\Rightarrow$ LOC

$$a^2 = 19.6^2 + 24.8^2 - 2(19.6)(24.8) \cos 42^\circ$$

THIS TABLE

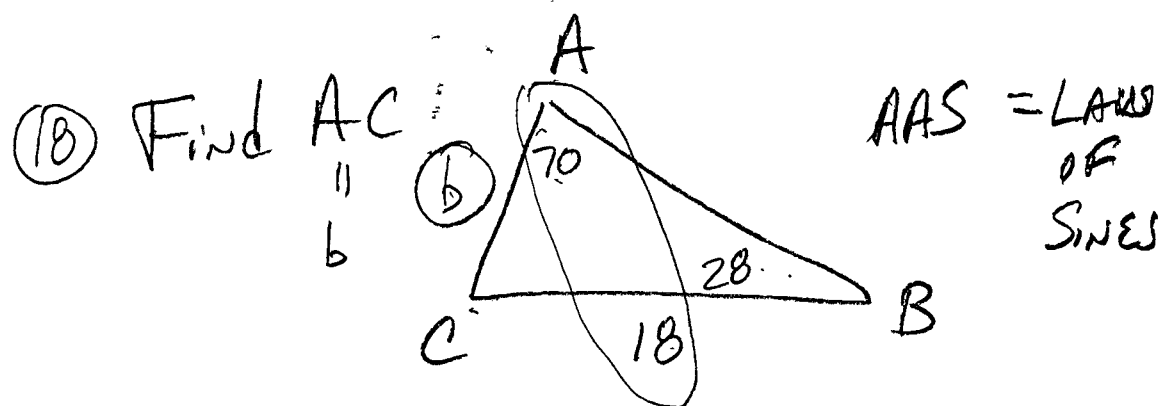
$$a^2 = 384.16 + 615.04 + 972.16(.7431)$$

$$722.45$$

$$a^2 = 1721.65$$

$$a = 41.49$$

$$a = 41.5 \checkmark$$



$$\frac{\sin 70^\circ}{18} = \frac{\sin 28^\circ}{b}$$

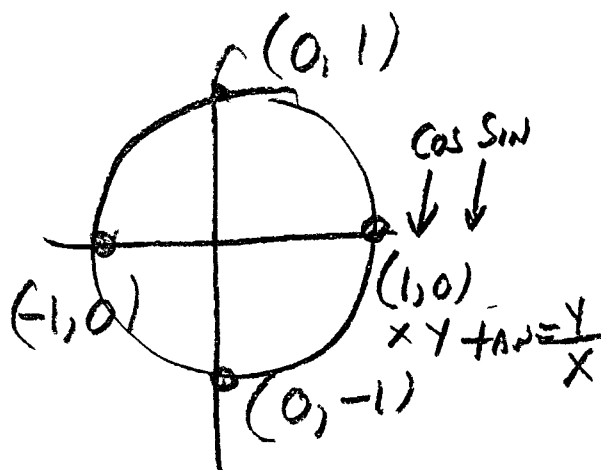
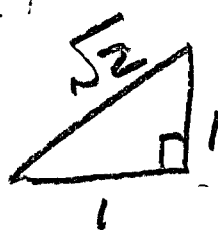
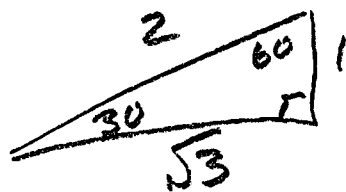
$$\cancel{b \sin 70^\circ} = \frac{18 \sin 28^\circ}{\cancel{\sin 70^\circ}}$$

$$b = \frac{18(.4695)}{(.9397)} \quad \boxed{\text{E}}$$

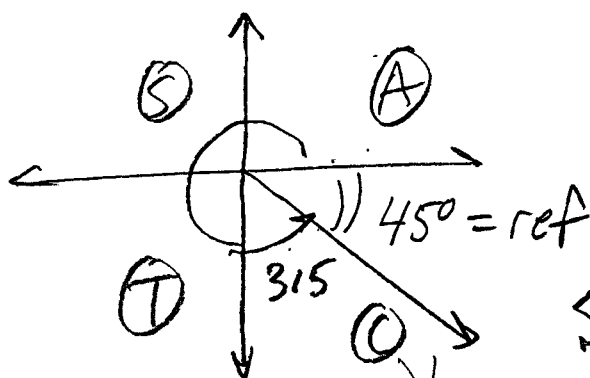
$$b = 8.993$$

$$\boxed{b = 9.0} \quad \checkmark$$

"EXACT"

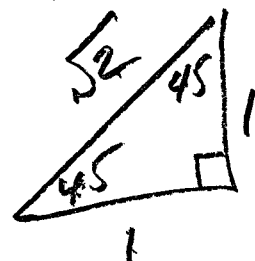


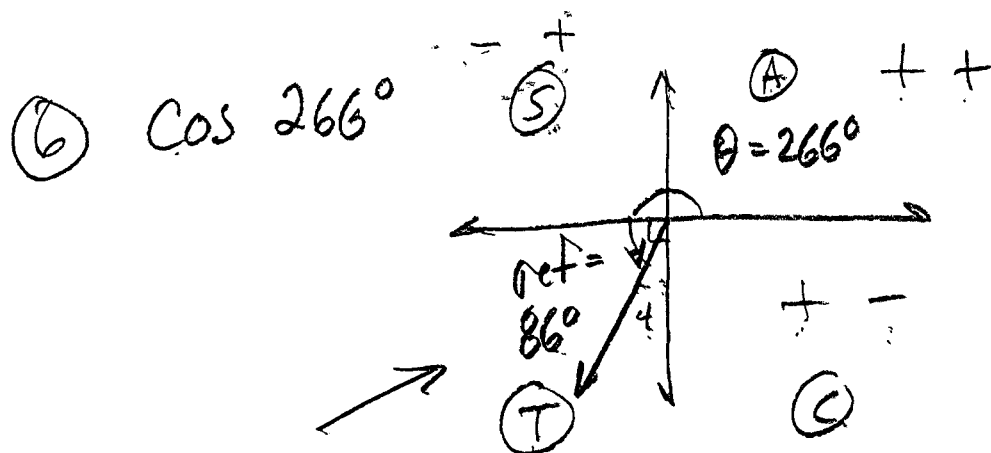
⑪ $\cos 315^\circ$



$$\cos 315^\circ = \cos 45^\circ = \frac{1}{\sqrt{2}} \cdot \frac{\sqrt{2}}{\sqrt{2}}$$

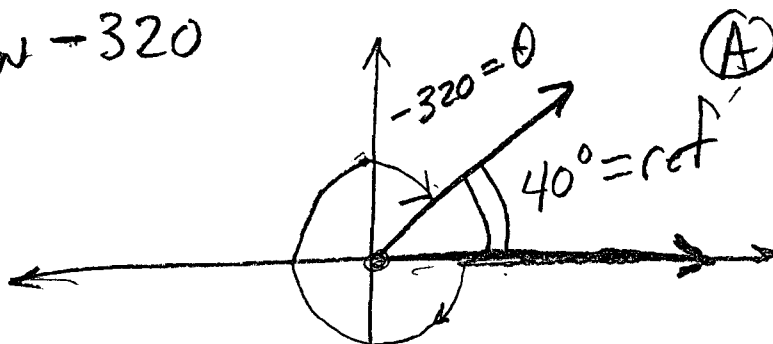
$$= \boxed{\frac{\sqrt{2}}{2}}$$





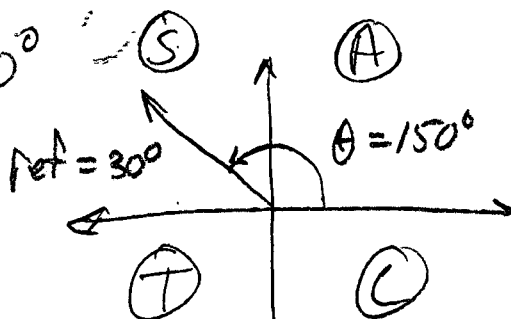
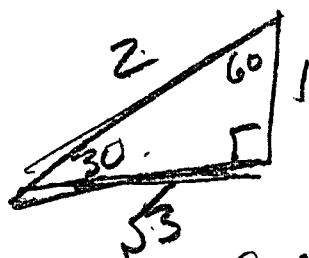
$$\cos 266 = -\cos 86 = \boxed{-0.0698}$$

⑧ $\tan -320$



$$\tan -320 = +\tan 40 = \boxed{0.8391}$$

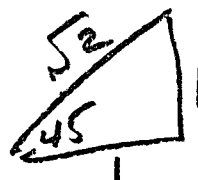
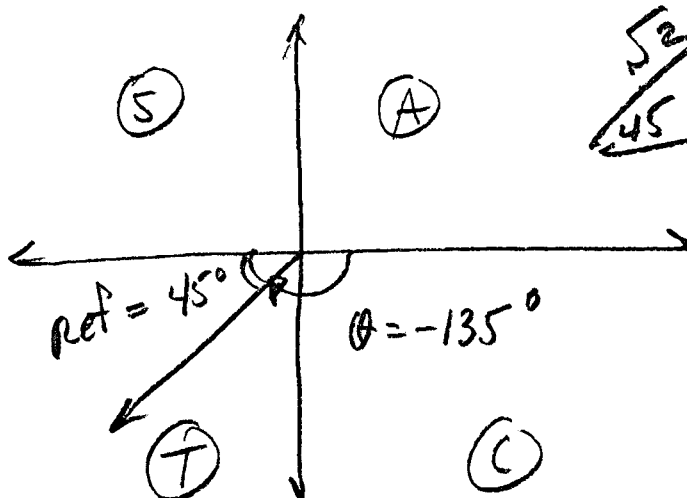
⑩ $\cos 150^\circ$



$$\cos 150 = -\cos 30 = \boxed{-\frac{\sqrt{3}}{2} = \cos 150}$$

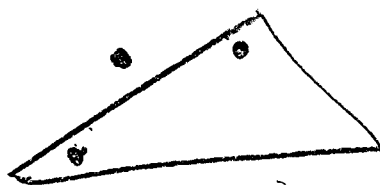
EXACT

⑪ $\sin -135^\circ$

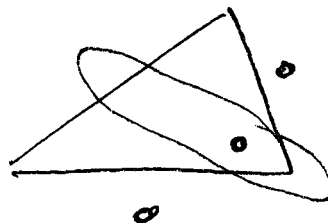


$$\sin -135 = -\sin 45 = -\frac{1}{\sqrt{2}} \cdot \frac{\sqrt{2}}{\sqrt{2}}$$

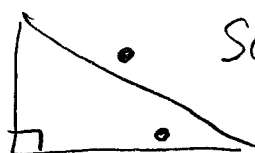
$$= \boxed{-\frac{\sqrt{2}}{2}}$$



ASA = Law of Sines



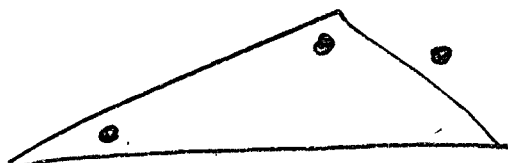
SAS = LOC
Law of Cosines



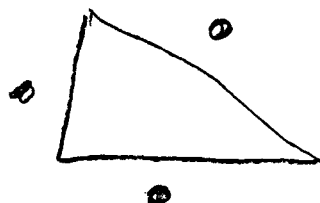
Soh Cah Toa



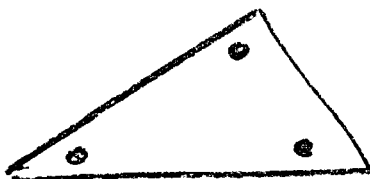
P.T.



AAS $\Rightarrow$ LOS



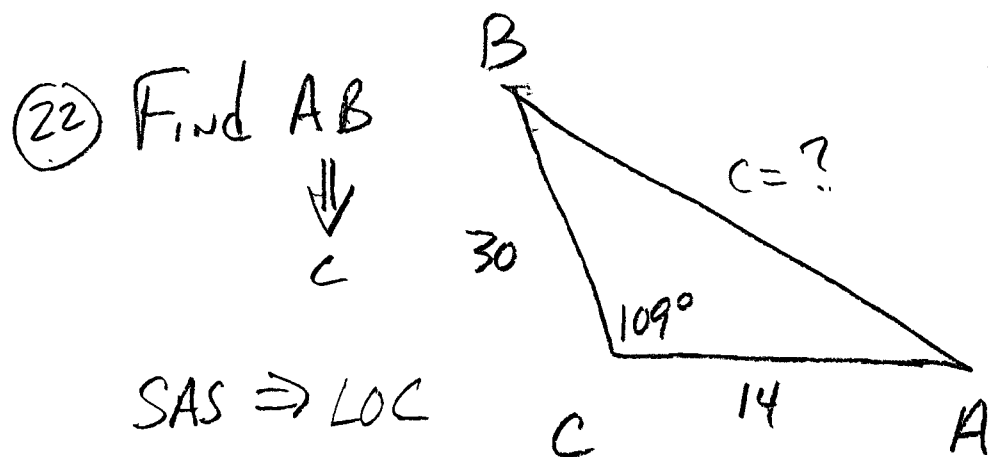
SSS $\Rightarrow$ LOC



AAA $\Rightarrow$ CANNOT SOLVE
 ∞ SOLUTIONS



SSA $\begin{cases} \text{LOS if you memorize} \\ \text{LOC if you can solve} \\ \text{a second degree eq.} \end{cases}$
0, 1, 2 SOLUTIONS



$$\frac{S}{A} \quad \nearrow \quad \cos 109 = (-\overset{\text{REF}}{\cos 71})$$

$$c^2 = 30^2 + 14^2 - 2(30)(14)(-\cos 71)$$

+