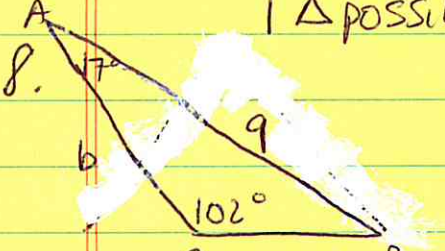
T/PC
Final Exam Review 5.5-5.6 (cont)

8. 1 △ possible



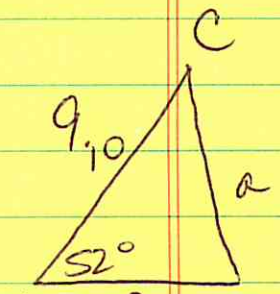
AAS $m\angle B = 180+102-17 = 180-119 = 61°$

$$\frac{\sin 102}{9} = \frac{\sin 17}{a}$$

$$a = \frac{9\sin 17}{\sin 102} \approx 2.690$$

$$\frac{\sin 102}{9} = \frac{\sin 61}{b}$$

$$b = \frac{9\sin 61}{\sin 102}$$



SAS $a^2 = 10^2 + 8^2 - 2(10)(8)\cos 52°$

$a = \sqrt{164 - 160\cos 52°}$

$a \approx 8.093$

$b \approx 8.047$

$$\frac{\sin C}{8} = \frac{\sin 52}{8.093}$$

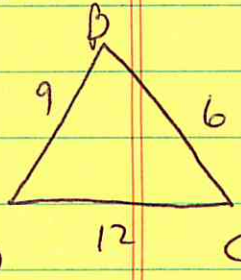
$$\sin C = \frac{8\sin 52}{8.093}$$

$$m\angle C = \sin^{-1}\left(\frac{8\sin 52}{8.093}\right)$$

$m\angle C \approx 51.2°$

$m\angle B = 180 - 52 = 128 - 51.2 = 76.8°$

10. SSS one △



A 1st $6^2 = 9^2 + 12^2 - 2(9)(12)\cos A$

$$\cos A = \frac{6^2 - 9^2 - 12^2}{-2(9)(12)}$$

$$\cos A = \frac{+189}{+216}$$

$m\angle A = \cos^{-1}\left(\frac{189}{216}\right) \approx 29.0°$

C next $\frac{\sin 29}{6} = \frac{\sin C}{9}$

$\sin C = \frac{9\sin 29}{6}$ $m\angle C = \sin^{-1}\left(\frac{9\sin 29}{6}\right) \approx 46.7$

$m\angle B = 180 - 29 - 46.7$

$m\angle B = 104.3$