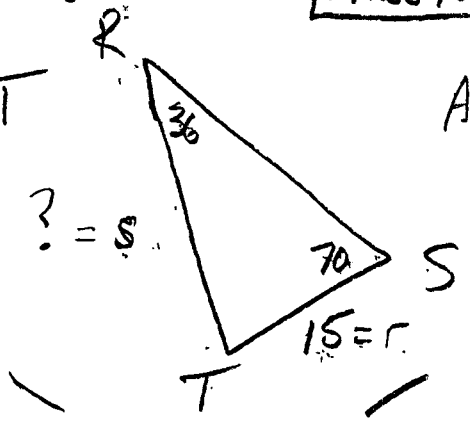
Geometry TUESDAY 11-27-12 CLASS NOTES

(10) FIND RT

Pg 573



AAS ⇒ LOS

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

$\frac{\sin 36}{15} = \frac{\sin 70}{S}$

$\frac{S(\sin 36)}{\sin 36} = \frac{15 \sin 70}{\sin 36}$

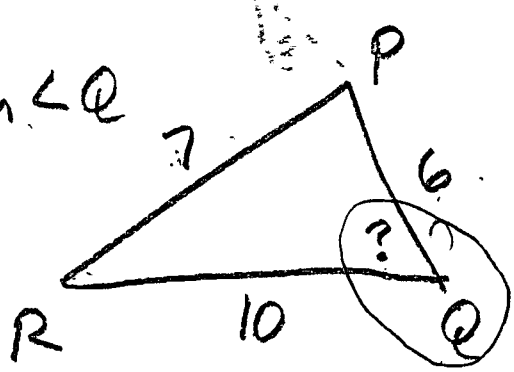
$S = \frac{15(.9397)}{(.5878)} = 23.980$

$S = 24.0$

Homework Review

Pg 573 # 10, 13, 15, 16

(13) $m\angle Q$



SSS

$c^2 = a^2 + b^2 - 2ab\cos C$

$r^2 = p^2 + q^2 - 2pq\cos R$

$q^2 = r^2 + p^2 - 2rp\cos Q$

$7^2 = 6^2 + 10^2 - 2(6)(10)\cos Q$

$49 = 36 + 100 - 120\cos Q$

$49 = 136 - 120\cos Q$

$-136 \quad -136$

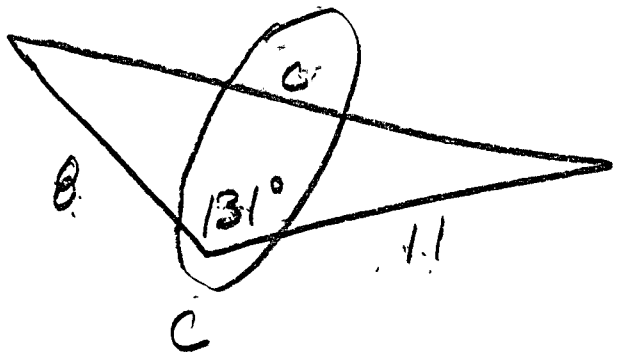
$\frac{-87}{-120} = \frac{-120(\cos Q)}{-120}$

$+\frac{29}{40} = \cos Q$

$.7250 = \cos Q$

$\cos^{-1}.7250 \cong 44^\circ$

(15)



SAS ⇒ LOC

ref = 49°

cos is −

S	A
T	C

$C^2 = 8^2 + 11^2 - 2(8)(11)\cos 131$

$C^2 = 64 + 121 - 176(-\cos 49)$

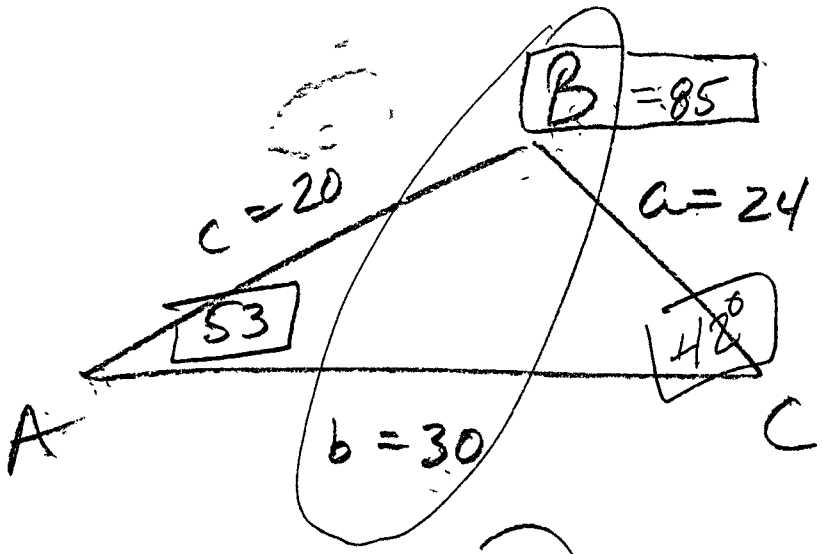
$C^2 = 185 + 176(.6561)$

$C^2 = 185 + 115.474$

$C^2 = 300.474$

$C = 17.334 \approx \boxed{17.3 = C}$

(16)



$30^2 = 20^2 + 24^2 - 2(20)(24)\cos B$

$900 = 400 + 576 - (48)(20)\cos B$

$900 = 976 - 960(\cos B)$

$-976 \quad -976$

$\frac{-76}{-960} = \frac{-960\cos B}{-960}$

$+.07917 = \cos B$

$\cos^{-1}.0792 = B \cong 85°$

24 × 24 = 96 + 48 = 576

LOS ⇒ Angle A

$\frac{24 \cdot \sin 85}{30} = \frac{\sin A \cdot 24}{24}$

$\frac{24}{30}$

$(.8 \times .9962) = \sin A$

$.7970 = \sin A$

$\sin^{-1}.7970 = A = 53°$

Angle C ⇒ 2 of 3 Angles

$C = 180 - (138)$

$C = 42°$