13.6A HW

Thursday, May 22, 2014
7:35 AM

pg. 892) 11-19 odd, 20

(11) A = 110.4°
C = 44.6°
b = 3.60

(13) A = 30.3°
B = 128.4°
C = 21.3°

(15) A = 55.7°
B = 76.3°
c = 15.3

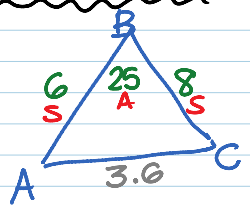
(17) A = 42.6°
B = 11.7°
C = 125.7°

(19) A = 36.7°
B = 47.3°
c = 58.2

(20) D

Solutions

(11)



SAS

$b^2 = a^2 + c^2 - 2ac\cos B$

$b^2 = 8^2 + 6^2 - 2(8)(6)\cos 25°$

$b^2 = 12.99$

$b = 3.6$

$A = 180 - (44.8 + 25)$

$A = 110.2°$

$\frac{\sin C}{6} = \frac{\sin 25}{3.6}$

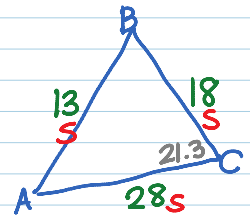
$\frac{3.6\sin C}{3.6} = \frac{6\sin 25}{3.6}$

$\sin C = .70$

$C = \sin^{-1}(.70)$

$C = 44.8°$

(13)



SSS

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

$13^2 = 18^2 + 28^2 - 2(18)(28)\cos C$

$169 = 1108 - 1008\cos C$

$\frac{-939}{-1008} = \frac{-1008\cos C}{-1008}$

$.93 = \cos C$

$\cos^{-1}(.93) = C$

$21.3° = C$

$B = 180 - (21.3 + 30.2)$

$B = 128.5°$

$\frac{\sin A}{18} = \frac{\sin 21.3}{13}$

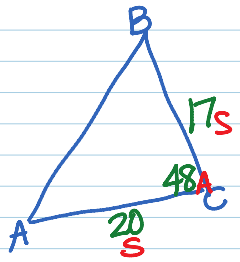
$\frac{13\sin A}{13} = \frac{18\sin 21.3}{13}$

$\sin A = .50$

$A = \sin^{-1}(.50)$

$A = 30.2°$

(15)



SAS

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

$c^2 = 17^2 + 20^2 - 2(17)(20)\cos 48$

$c^2 = 233.99$

$c = 15.3$

$B = 180 - (55.7 + 48)$

$B = 76.3°$

$\frac{\sin A}{17} = \frac{\sin 48}{15.3}$

$\sin A = \frac{17\sin 48}{15.3}$

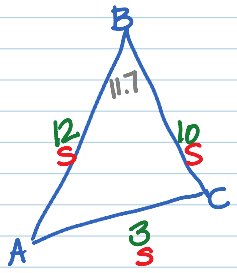
$A = \sin^{-1}(.83)$

$A = 55.7°$

B

SSS

(17)



SSS

$b^2 = a^2 + c^2 - 2ac\cos B$

$3^2 = 10^2 + 12^2 - 2(10)(12)\cos B$

$9 = 244 - 240\cos B$

$\frac{-235}{-240} = \frac{-240\cos B}{-240}$

$.98 = \cos B$

$\cos^{-1}(.98) = B$

$11.7° = B$

$\frac{\sin A}{10} = \frac{\sin 11.7}{3}$

$\sin A = \frac{10\sin 11.7}{3}$

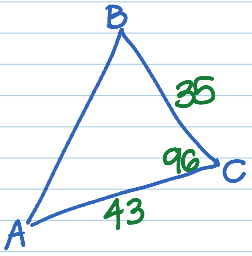
$A = \sin^{-1}(.68)$

$A = 42.6°$

$C = 180 - (42.6 + 11.7)$

$C = 125.7°$

(19)



ASA

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

$c^2 = 43^2 + 35^2 - 2(43)(35)\cos 96$

$c^2 = 3388.63$

$c = 58.2$

$\frac{\sin A}{35} = \frac{\sin 96}{58.2}$

$\sin A = \frac{35\sin 96}{58.2}$

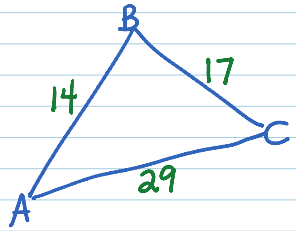
$A = \sin^{-1}(.60)$

$A = 36.7°$

$B = 180 - (96 + 36.7)$

$B = 47.3°$

(20)



$b^2 = a^2 + c^2 - 2ac\cos B$

$29^2 = 17^2 + 14^2 - 2(17)(14)\cos B$

$841 = 485 - 476\cos B$

$356 = -476\cos B$

$-.75 = \cos B$

$\cos^{-1}(-.75) = B$

$138.4° = B$

D