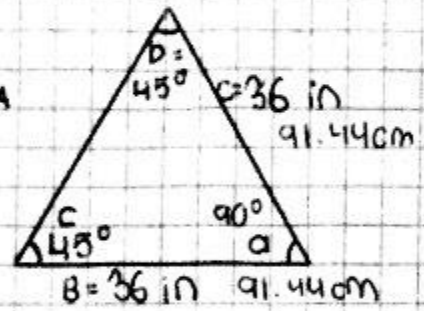
Denisse Salgado Alsona

2/10/18

# Tarea

Determinar las medidas de los angulos y lados de los siguientes triangulos (° y cm)

1:




36 in - 91.44cm

180 - 45 - 45 = 90°

$\frac{A}{sen\,a} = \frac{91.44cm}{sen\,b} = \frac{91.44cm}{sen\,45}$

$sen\,b = \frac{91.44(sen\,45)}{91.44}$

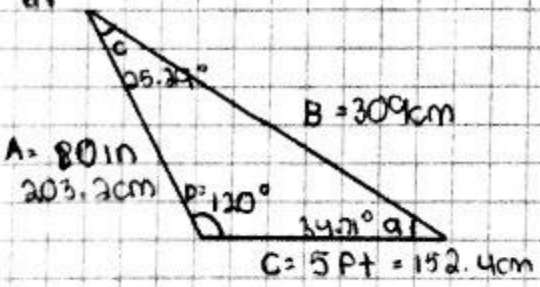
$sen^{-1}(.7071) = b = 44.90°$

↳ 45°

$\frac{A}{sen\,90} = \frac{91.44}{sen\,45}$

$A = \frac{91.44(1)}{(.7071)} = A = 129.31\,cm$

2:




80 in - 203.2cm

5Pt - 152.4cm

$B = \sqrt{(203.2)^2 + (152.4)^2 - 2(203.2)(152.4)\cos 120}$

$B = \sqrt{41290.24 + 23225.76 - 61935.36(-.5)}$

$B = 164516 + 30967.68$

$B = 309\,cm$

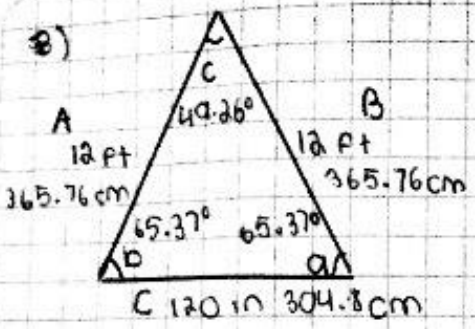
$\frac{203.2}{sen\,a} = \frac{309}{sen\,120} = \frac{152.4}{sen\,C}$

$sen\,a = \frac{203.2(sen\,120)}{309}$

$sen^{-1}(.5695) = a = 34.71°$

$180 - 34.71 - 120 = C = 25.29°$

3)




12 ft — 365.76 cm
120 in — 304.8 cm

$(365.76)^2 = (365.76)^2 + (304.8)^2 - 2(365.76)(304.8)\cos A$
$133780.37 = 133780.37 + 92903.04 - 222967.29 \cos A$
$133780.37 = 226683.41 - 222967.29 \cos A$
$-92903.04 = -222967.29 \cos A$

$\cos A = \frac{92903.04}{222967.29}$

$\cos^{-1}(.4166) = A = 65.37°$

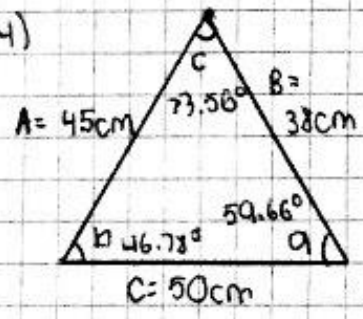
$\frac{365.76}{\text{sen } 65.37} = \frac{365.76}{\text{sen } B}$

$\text{sen } b = \frac{365.76(.9091)}{365.76}$

$\text{sen}^{-1}(.9091) = b = 65.37$

$180 - 65.37 - 65.37 = a = 49.26°$

4)




$(45)^2 = (38)^2 + (50)^2 - 2(38)(50)\cos a$
$2025 = 1444 + 2500 - 3800 \cos a$
$2025 = 3944 - 3800 \cos a$
$-1919 = -3800 \cos a$

$\cos a = \frac{1919}{3800}$

$\cos^{-1}(.505)$

$a = 59.66°$

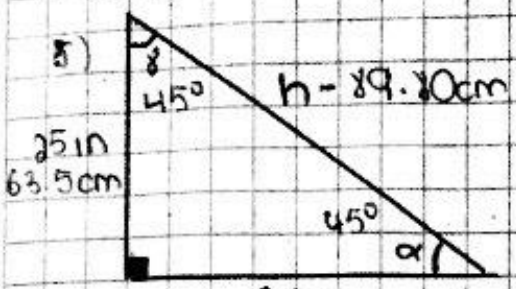
$\frac{45}{\text{sen } 59.66} = \frac{38}{\text{sen } b}$

$\text{sen } b = \frac{38(.1630)}{45}$

$\text{sen}^{-1}(.7287) = b = 46.78°$

$180 - 59.66 - 46.78 = 73.56°$

5)




$25in - 63.5cm$

$h = \sqrt{(63.5)^2 + (63.5)^2}$

$h = \sqrt{4032.25 + 4032.25}$

$h = \sqrt{8064.5}$

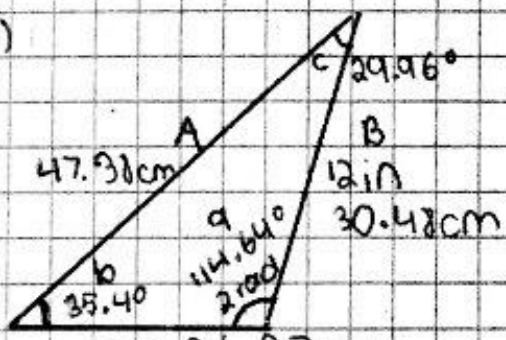
$h = 89.80cm$

$\text{sen}\,\gamma = \frac{63.5}{89.80}$

$\text{sen}^{-1}(.7071) = \gamma = 45°$

$180 - 45 - 90 = 45°$ $\alpha = 45°$

6)




$180 - 114.64 - 35.4 = 29.96°$

$\frac{A}{\text{sen}\,114.64} = \frac{30.48}{\text{sen}\,35.4} = \frac{C}{\text{sen}\,29.96}$

$A = \frac{30.48(.9089)}{.5792}$

$A = 47.38cm$

$C = \frac{30.48(.4993)}{.5792}$

$C = 26.27cm$

$11,000 - 180°$

$2,100 - x$

$x = 114.64°$

$12in - 30.48cm$