8:-0

481 1-12

1. $(1,4)\ (-2,4)$

$d = \sqrt{(1-(-2))^2+(4-4)^2}$

$= \sqrt{3^2+0}$

$\boxed{d = 3}$

$MP = \left(\frac{1+(-2)}{2}, \frac{(4+4)}{2}\right)$

$MP = \left(-\frac{1}{2}, 4\right)$

2. $(-5,3), (-5,8)$

$d = \sqrt{(-5-(-5))^2+(3-8)^2}$

$= \sqrt{0^2+(-5)^2}$

$d = 5$

$MP = \left(\frac{-5+(-5)}{2}, \frac{(8+3)}{2}\right)$

$MP = \left(-5, \frac{11}{2}\right)$

3. $(2,-9)\ (-3,-7)$

$d = \sqrt{(2--3)^2+(-9--7)^2}$

$d = \sqrt{25+4}$

$d = \sqrt{29}$

$MP = \left(\frac{2+-3}{2}, \frac{-9+-7}{2}\right)$

$MP = \left(\frac{-1}{2}, -8\right)$

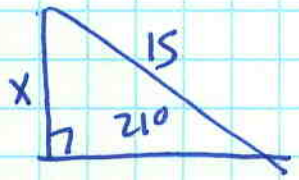
4. $(-4,-1)\ (-6,-8)$

$d = \sqrt{(-4+6)^2+(-1+8)^2}$

$= \sqrt{4+49} = \sqrt{53}$

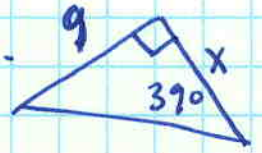
$MP = \left(\frac{-4-6}{2}, \frac{-1-8}{2}\right)$

$MP = \left(-5, -\frac{9}{2}\right)$

5. 

$X = 15\sin 21°$

$X = 5.376$

6. 

$X = \frac{9}{\tan 39°}$

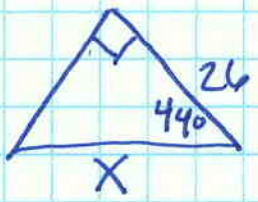
$X = 11.11$

4.

7. 

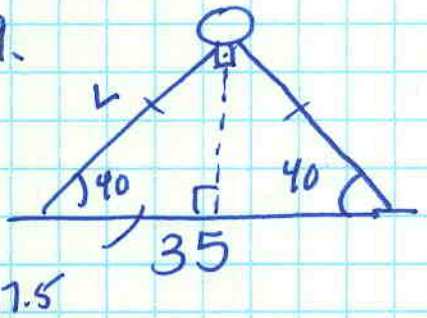
$X = 7\cos 55°$

$x = 4.015$

8. 

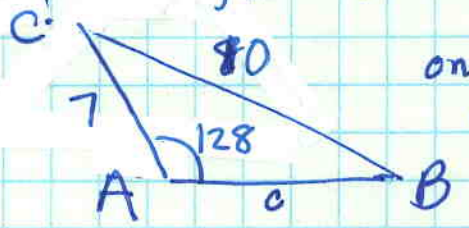
$X = \frac{26}{\cos 44}$

$X = 36.144$

9. 

$L = \frac{17.5}{\cos 40} = 22.84'$

10. $a = 10$, $b = 7$, $A = 128°$



one Solution
$a > b$

$\frac{\sin 128}{10} = \frac{\sin B}{7}$

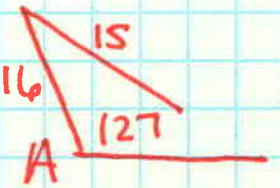
$\sin B = .552$ $B = 33.48°$
$C = 18.52°$

$\frac{\sin 128}{10} = \frac{\sin 18.52}{c}$

$c = 4.03$

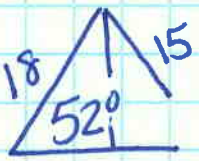
11. $a=15$ $b=16$ $A=127°$

$a<16$ no solution



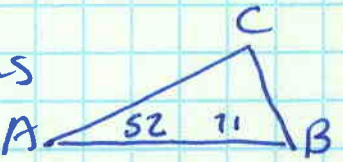
12. $a=15$, $b=18$, $A=52°$

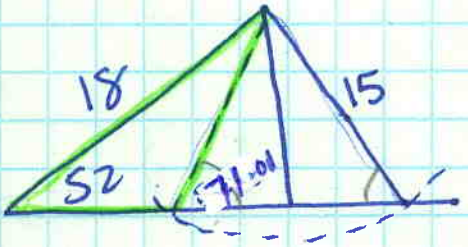
$a<b$



$h = 18\sin 52 = 14.184$

$a>h$ so 2 solutions





$\frac{\sin 52}{15} = \frac{\sin B}{18}$ $\sin B = .946$ $B = 71.01°$

$\frac{\sin 56.98}{c} = \frac{\sin 52}{15}$ $C = 56.98$

$c = 15.96$

$B' = 108.99$

$C' = 19.01$

$c = 6.2$

$\frac{\sin 108.99°}{18} = \frac{\sin 19.01}{c}$

1. $d=3$ $MP=(-\frac{1}{2}, 4)$

2. $d=5$ $MP=(-5, \frac{11}{2})$

3. $d=\sqrt{29}$ $MP=(-\frac{1}{2}, 8)$

4. $d=\sqrt{53}$ $MP=(-5, -\frac{9}{2})$

5. $x=5.376$

6. $x=11.11$

7. $x=4.015$

8. $x=36.144$

9. $L=22.84$ feet (both)

10. $a>b \rightarrow$ one solution

$c=4.03$, $B=33.48°$, $C=18.52°$

11. $a<16$

no solution

12. $a<b$ $a>h$ 2 solutions

$c=15.96$, $B=71.01°$, $C=56.98°$

$c' = 6.2$ $B' = 108.99$ $C' = 19.01°$