Accel Math III Practice Worksheet #1: Law of Sines Name _____

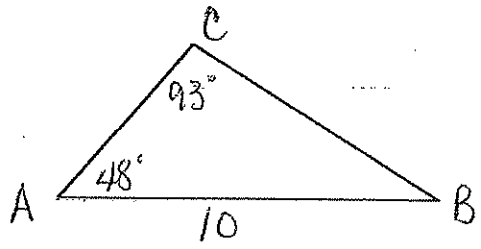
Unit #7: Extended Trigonometry

MA3A6 d

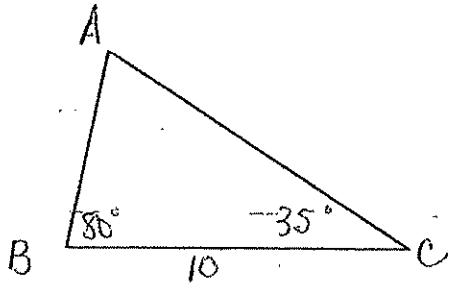
Part I

Solve each triangle for all missing parts.

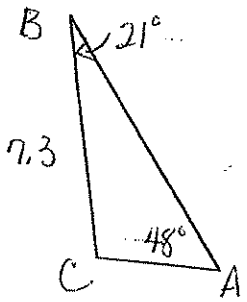
1.



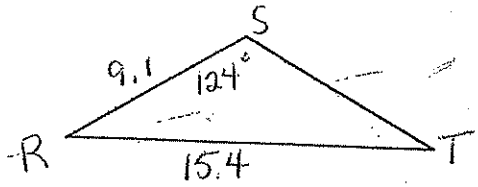
2.



3.



4.



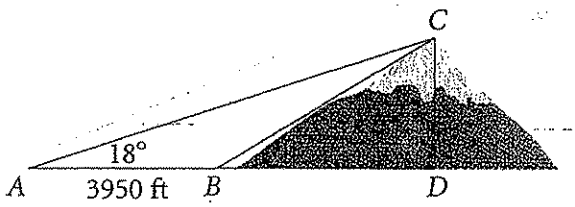
5. $\alpha = 40°, \beta = 60°, a = 4$

6. $\alpha = 35°, \beta = 15°, c = 5$

Application Problems:

7 A surveyor locates points *A* and *B* at the same elevation and 3,950 feet apart. At *A*, the angle of elevation to the summit of the mountain is 18°. At *B*, the angle of elevation is 31°.

a) Find *BC*, the distance from *B* to the summit.
b) Find *CD*, the height of the mountain.



8. A forest ranger in an observation tower sights a fire 39° east of north. A ranger in a tower 10 miles due east of the first tower sights the fire at 42° west of north. How far is the fire from each tower?