Math 051 Trigonometry
Copy the original problem.
Convince *me* that ***you*** understand the concept!
Mr. Mumaugh

Name_____

Date _____

Exam #1

I Solve for all missing parts of the given triangle ABC. (15 pts ea)

A) $\begin{cases} a = 10 \\ b = 15 \\ c = 20 \end{cases}$

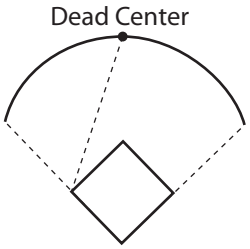
B) $\begin{cases} a = 12 \\ b = 20 \\ C = 30^\circ \end{cases}$

C) $\begin{cases} A = 38^\circ \\ B = 25^\circ \\ b = 15 \end{cases}$

D) $\begin{cases} a = 7 \\ b = 9 \\ A = 35^\circ \end{cases}$

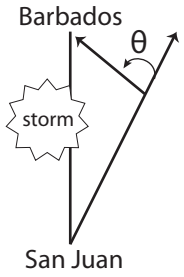
E) $\begin{cases} a = 3 \\ b = 4 \\ c = 5 \end{cases}$

II Application Problems



A) On all professional baseball fields the bases are 90 feet apart. The distance from home plate to dead center of Wrigley Field is 400 feet. How far is it from dead center to third base? See the diagram. (10 pts)

B) On Wednesday a cruise ship leaves port at 3 p.m. maintaining an average speed of 15 mph in going from San Juan, Puerto Rico to Barbados, West Indies, a distance of 600 miles. To avoid a a tropical storm, the captain heads from San Juan in a direction 20° east of a direct heading to Barbados. The captain maintains the 15 mph for 10 hours, after which the path to Barbados becomes clear of storms. Angle θ is the change in direction that the captain will make when, once again, he heads directly toward Barbados. (15 pt tot)



1) To the nearest minute, what day and time does the cruise ship arrive in Barbados?
2) To the nearest minute, what is the value of angle θ?

Bonus ---------- 5 points ----------

Find the area for each of the triangles in section I above.