

# ***Boston Sailing Center***

## **Coastal Navigation**

### **Problem Set 1**

USE MAGNETIC DEGREES FOR ALL PROBLEMS

1. What is the difference between “variation” and “deviation”?
2. Why is the nautical mile such a handy unit of distance in navigation?
3. You wish to sail from “The Harbor,” in Block Island ( $41^{\circ} 10.4' N$ ,  $71^{\circ} 33.4' W$ ) to Fort Adams Point, Newport ( $41^{\circ} 28.9' N$ ,  $71^{\circ} 20.2' W$ ). What course would you steer after you clear Bell “1”? If you pass Bell “1” at 0900 and make a steady speed of 6 knots, what is your expected time of arrival at Fort Adams?
4. If you make a mistake of  $2^{\circ}$  when plotting or steering your course, how far off will your landfall be?
5. Using the ‘correct’ course from #3, plot your DR for 10:00. What is the LAT/LON?
6. From the 10:00 DR, you sail a course of 055 at a speed of 5 kts. Plot the 11:00 DR. What is the LAT/LON?
7. List some reasons why you probably aren’t exactly there.

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Suggested reading: *Coastal Navigation* chapters 1, 2, 3 & 5.