

# Nautical Chart Exercises

To do these exercises each team will need 2 protractors, 2 compasses, pencils, and rulers.

First familiarize yourself with the symbols on the back of the chart and the chart itself. This familiarizing process is often called ‘getting your bearings’ or ‘orienting yourself’ to the map.

Things to find before you get started on the exercises:

- The scale of the chart
- The Compass Roses (there are 3 on this chart). A compass rose or wind rose, is a figure displaying the orientation of the cardinal directions, north, south, east and west on a nautical chart.
  - Why would this chart need 3 compass roses?
- Refer to your Nautical Terms glossary for terms you are unsure of or look it up on the internet.

Exercises:

1. Find Rose Island in Narragansett Bay.  
What kind of navigational aid is on the island?
2. What does “F R 48ft. 12M HORN” mean?
3. Find the lighthouse on Cuttyhunk Island. What does “Qk FI 63ft. 12M” mean?
4. What is the depth of water over Brown’s Ledge in Rhode Island Sound?  
Is this depth at high tide or low tide?
5. If you were to anchor at Brown’s Ledge what would you expect the bottom to be like?
6. What type of bottom is at  $41^{\circ} 09.7' N \times 71^{\circ} 29.2' W$ ?  
Would this be a good spot to anchor? Why or why not?
7. How many minutes are there in a degree?
8. How many seconds are there in a minute?
9. How many seconds are in  $10.1'$ ?
10. Every minute of latitude (horizontal lines) equals one nautical mile. How many nautical miles does one second represent?
11. How many nautical miles does  $0.5'$  represent?
12. What is the areas in square miles of the “Prohibited Area” around Noman’s Land?  
Hint: measure miles using the latitude markings on the left or right edge of the chart or the mileage scale at the bottom of the chart. Don’t use longitude markings!
13. Why is the area around Noman’s Land prohibited, can you tell?

14. What kind of navigational aid is at  $41^{\circ}20.9' \text{ N} \times 70^{\circ} 50.1' \text{ W}$ ?
15. Why wouldn't you want to anchor at  $41^{\circ} 14.5' \text{ N} \times 71^{\circ} 12.6' \text{ W}$ ?
16. Describe the navigational aid at  $41^{\circ} 24.2' \text{ N} \times 70^{\circ} 51.1' \text{ W}$ .
17. How far is it between the "BUZZARDS" light tower and the RB "VS" whistle buoy?
18. What feature is at  $41^{\circ} 30' \text{ N} \times 70^{\circ} 53.9' \text{ W}$ ?
19. What navigational feature is at  $41^{\circ} 36.2' \text{ N} \times 70^{\circ} 47.5' \text{ W}$ ?
20. Give the latitude and longitude of the following:
  - Tower on Goosebury Neck
  - Brenton Reef light tower
  - Gong buoy off the west end of Noman's Land
  - R "10" gong buoy in Buzzards Bay
21. How far is it (in miles or nautical miles) to sail from Woods Hole to Tarpauin Cove? In what approximate direction should you travel?
22. How far is it to sail from Woods Hole to the point where you can safely round Sow and Pigs Reef?
23. If you came across a buoy that was red colored, had a bell, was marked with a 23 and flashed green every two seconds, what symbol and label would you look for on your chart?
24. VECTOR ADDITION / SUBTRACTION
  - How long would it take you to get from the northern-most tip of Block Island to Newport, RI if your ships maximum speed is 15 knots and there is a 5 knot Southwest current (currents are named based on where they are going).