

# Terrestrial - BP - Cn to steer for distance abeam

This explanation includes solutions to questions 477, 515, 592, 961, and 966.

## USCG Navigation Problem (Near Coastal) Question 592

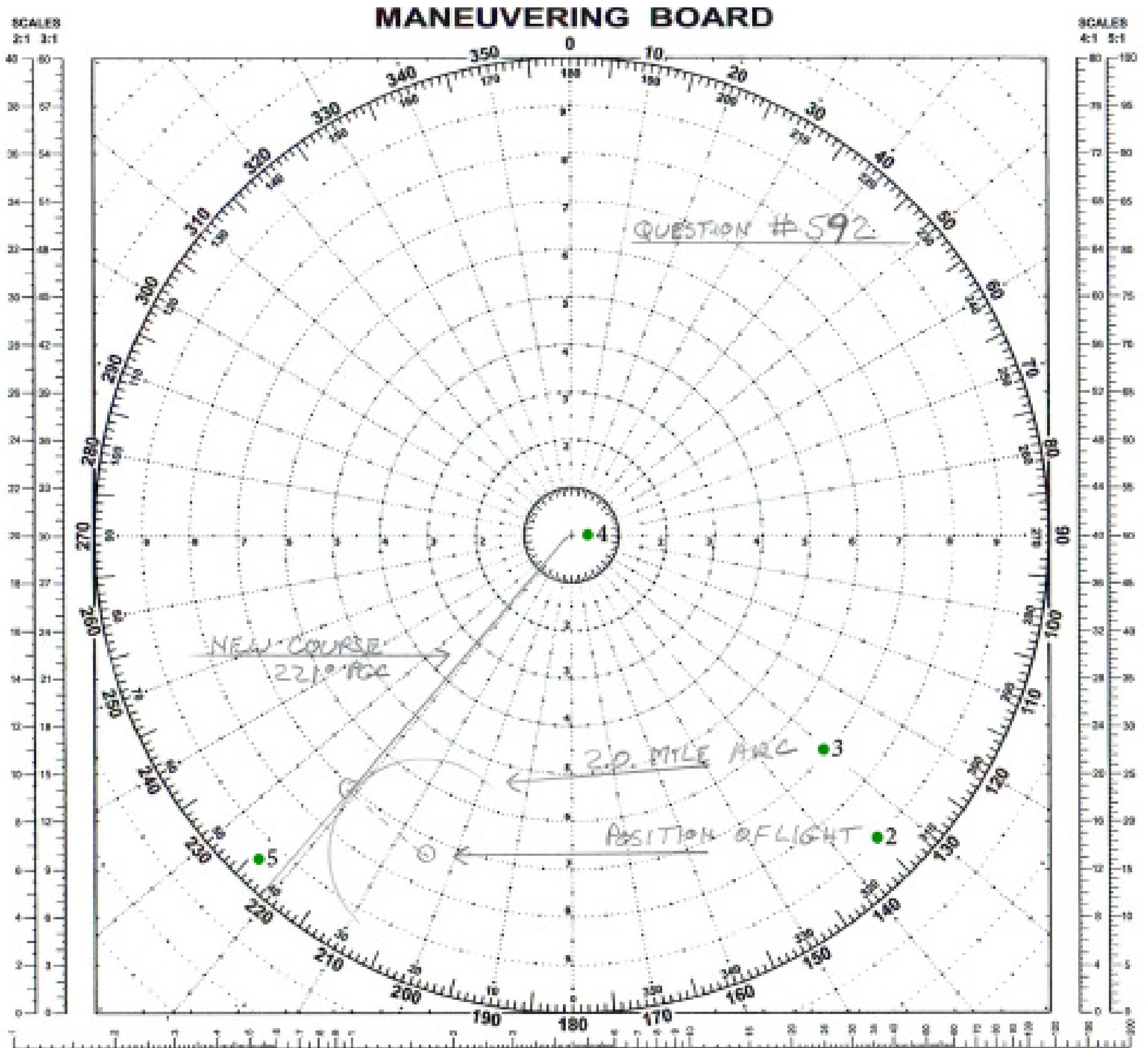
While on a course of  $214^{\circ}$ pgc, a light bears  $9^{\circ}$  on the port bow at a distance of 7.4 miles. What course should you steer to pass 2 miles abeam of the light leaving it to port?

### Explanation (Bearing Problem - Cn To Steer for Distance Abeam)

Since the question is asking what course to steer, given in pgc (per gyro compass) and does not request a true course to steer, the student can use pgc bearings/headings for the entire problem.

- 1 Using the maneuvering board, choose the appropriate scale. The 1:1 scale will work for this problem. The numbers printed inside of the maneuvering board is 1:1 as opposed to using the scales printed on either side of the board.
- 2 Plot the position of light using the bearing and range giving in the problem. Since the light is  $9^{\circ}$  on the port and vessel's is  $214^{\circ}$ pgc we subtract  $9^{\circ}$  from  $214^{\circ}$ pgc giving us  $205^{\circ}$ pgc. Using a bearing  $205^{\circ}$ pgc, measure out 7.4 miles placing a small dot.
- 3 Draw a 2.0mile semicircle or arc as needed around the light on the side vessel is to pass.
- 4 Place pencil at center of maneuvering board. Using triangle or a straight edge pivot off pencil then draw a tangent line on side vessel is to pass.
- 5 Extend the line to outer ring. Read correct course to steer.

**Answer: Cn  $221^{\circ}$ pgc**



USCG Book Nav Problem (Near Coastal) Question 592 Maneuvering Board