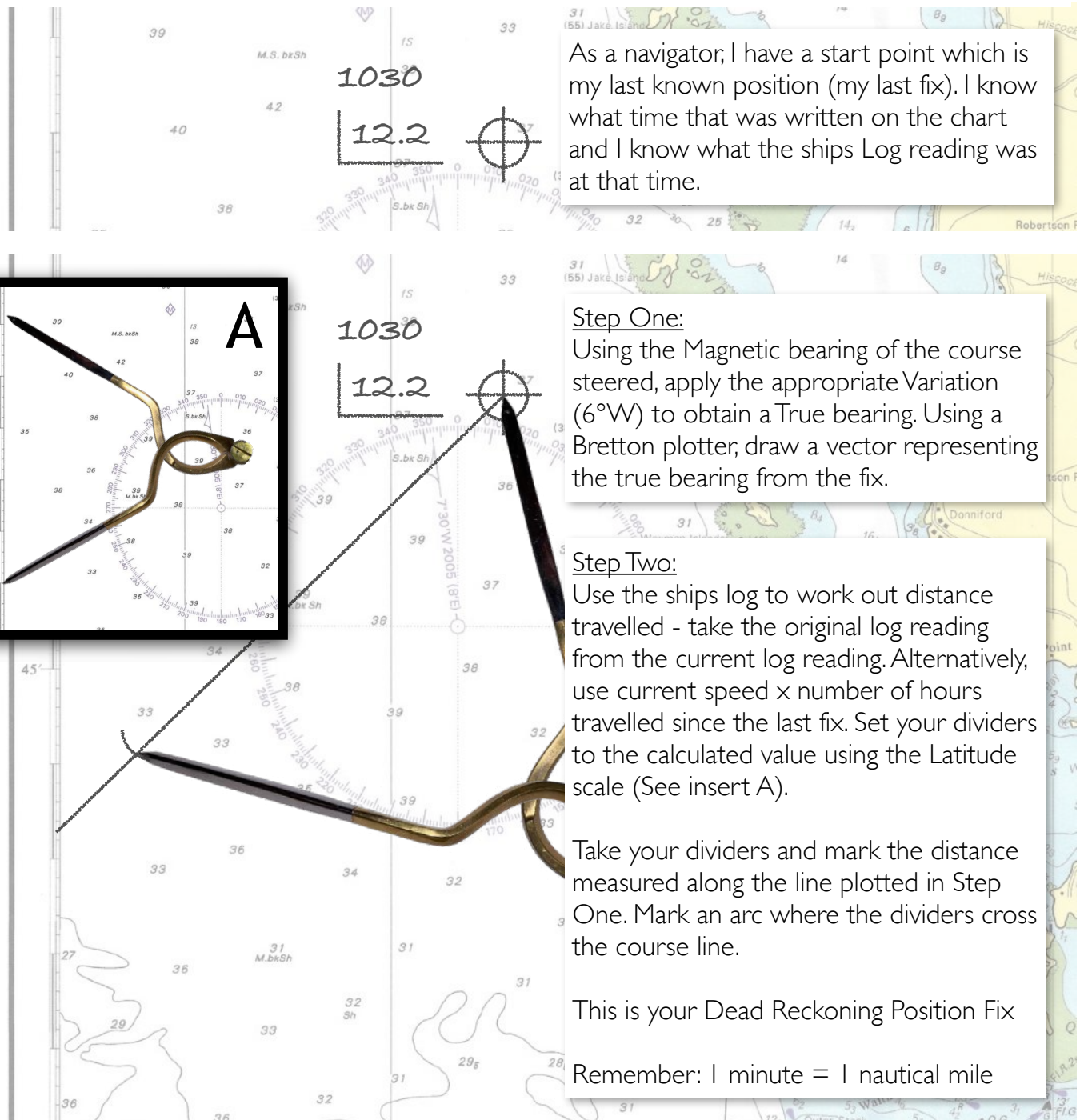


DEAD RECKONING

Intro: Dead Reckoning is the most basic form of position fixing. It only uses 2 variables (course steered and distance travelled) to get a rough idea of where we might be. Dead Reckoning is commonly used after a period of travel, however could be used before to give an idea of where a boat may be in the future. Due to its estimated nature, Dead Reckoning shouldn't be used for long periods of travel as the circle of uncertainty (the amount of inaccuracy of the fix) increases with time.

To perform a Dead Reckoning, the navigator needs to know:

- 1) The course the boat has been steering
- 2) How far the boat has travelled through the water



As a navigator, I have a start point which is my last known position (my last fix). I know what time that was written on the chart and I know what the ships Log reading was at that time.

Step One:
Using the Magnetic bearing of the course steered, apply the appropriate Variation (6°W) to obtain a True bearing. Using a Bretton plotter, draw a vector representing the true bearing from the fix.

Step Two:
Use the ships log to work out distance travelled - take the original log reading from the current log reading. Alternatively, use current speed x number of hours travelled since the last fix. Set your dividers to the calculated value using the Latitude scale (See insert A).

Take your dividers and mark the distance measured along the line plotted in Step One. Mark an arc where the dividers cross the course line.

This is your Dead Reckoning Position Fix

Remember: 1 minute = 1 nautical mile