3 Navigating Tides in the Porpoise Channel

Marine Month IN CANADA

Answer Key

Question #1:

Calculate the 25% safety margin for a ship that is 6.5m deep, and add it to the depth of the ship. Will there be enough water for the ship to pass over Agnew Bank at zero tide?

- Safety margin: 25% of 6.5 metres = 0.25×6.5 metres = 1.625 metres
- Total required depth: 6.5+1.625 metres = 8.125 metres
- Agnew Bank depth at zero tide: 7 metres
- 8.125 metres (required) > 7 metres (available)

Answer: No, there will not be enough water at zero tide for the ship to pass with the required safety margin.

Question #2:

If there isn't going to be enough water at zero tide (7m) for the ship to have a 25% safety margin, how many metres of "tidal lift" will be required?

- Required depth: 8.125 metres
- Depth at zero tide: 7 metres
- Tidal lift required: 8.125-7 metres = 1.125 metres (or 1.1 metres to the nearest tenth)

Answer: A tidal lift of 1.1 metres will be required.

Question #3:

Look at the tide tables on Sunday, October 20th. The ship is hoping to pass over Agnew Bank at 9:50am. Will there be enough tidal lift at that time for her to pass?

- Tidal height at 09:49: 1.9 metres
- Depth at zero tide: 7 metres
- Total depth at 09:49: 7 + 1.9 metres = 8.9 metres
- Required depth: 8.125 metres

Answer: Yes, there will be enough tidal lift at 9:50am for the ship to pass, as the total depth at that time will be 8.9 metres, which is greater than the required 8.125 metres.