1. In the Bay of Fundy, the water around the harbour changes from 1.5 m at low tide at 02:00 h to 15.5 m at high tide at 08:00 h.

    a) If the tidal cycle is sinusoidal, determine a function to represent the depth of the water in the harbour.

    b) Determine the depth of water in the harbour at 04:30 h, correct to one decimal place.