

## 13.00 Introduction to Ocean Science and Technology

### Problem set 6 (correction to number 3)

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**3.** A supertanker explodes in a coastal area where the water depth is a constant of 15 meters. The explosion generates a sequence of waves propagating toward an offshore structure that is 2 km away. A wave probe records two dominant wave trains, one with a period of 4 seconds, and another with a period of 30 seconds.

- (a.) Evaluate the wavelength, phase, and group velocity of the waves.
- (b.) Which wave packet arrives first?