

# Waves

## 4. Wave Properties

### CONCEPT 2

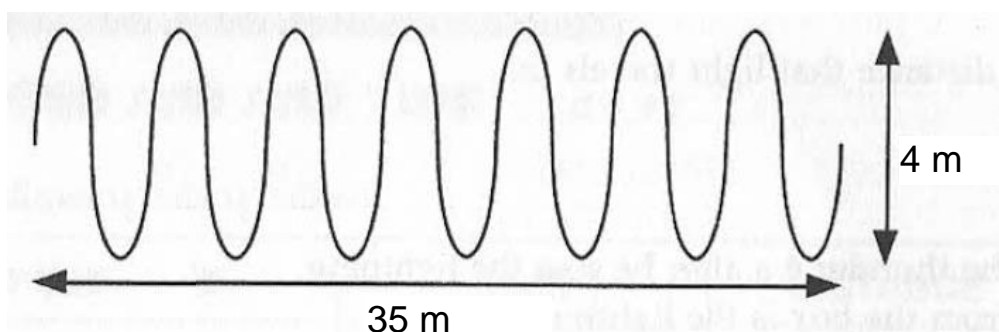
### TEST YOURSELF

#### EXPLORING WAVES

##### KNOW

Q1 Describe the difference between a crest and a trough of a transverse wave.

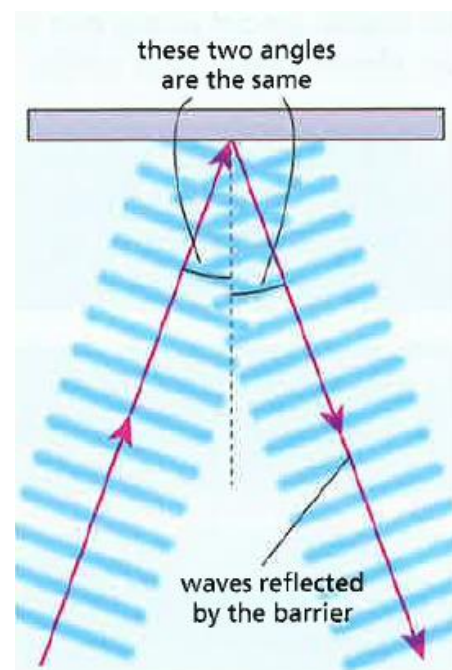
Q2 What is the wavelength and the amplitude of the following waves?



##### APPLY

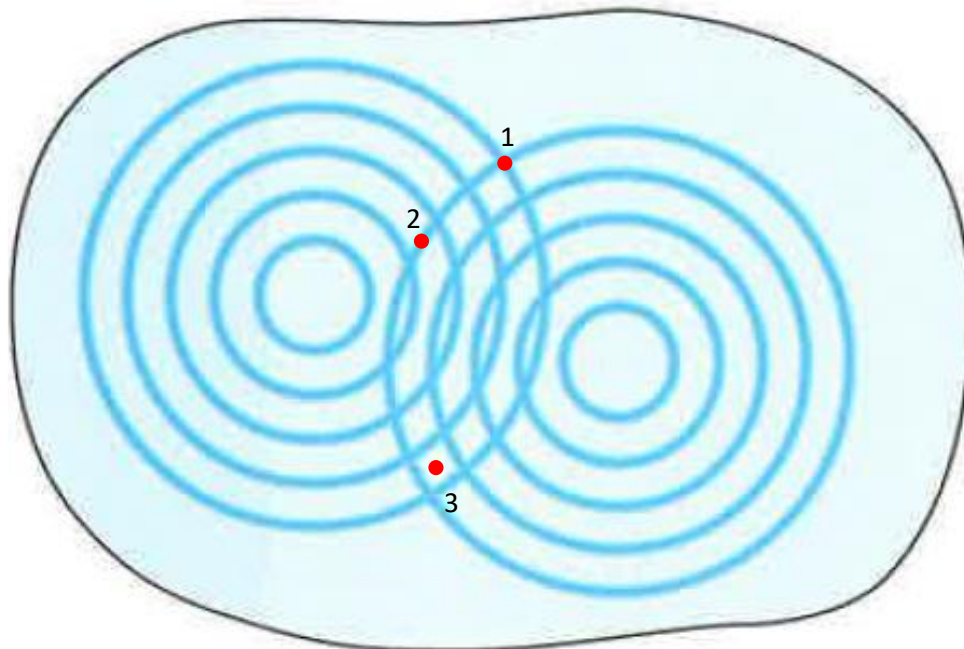
Q3 Look at the diagram showing how a water wave reflects from a rigid flat smooth barrier. The diagram shows ripples of water – consider the ripples as the crests of the water waves.

- What do you notice about where the angles are measured from?
- Why might a bumpy, rough surface not produce the reflected waves with the same shape?
- What would happen if a sponge was used instead of a rigid barrier?



## EXTEND

- Q4 What is meant by superposition of waves?
- Q5 Two pebbles are dropped into a still pond. Both waves have the same amplitude and wavelength.



Three positions are marked on the diagram. The blue lines represent the crests of the waves. Troughs are in between two crests.

- (a) At what position would you find a crest double the height of the individual waves?
- (b) At what position would you find no wave because?