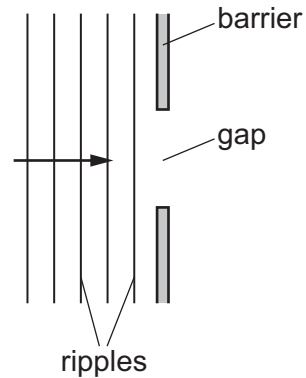


- 27** A ripple tank and a barrier with a single gap are used to demonstrate the diffraction of surface ripples on water. Initially, the wavelength of the ripples is five times smaller than the gap in the barrier.



Which change increases the amount of diffraction observed?

- A** double the amplitude of the ripples
 - B** double the width of the gap
 - C** halve the frequency of the ripples
 - D** halve the wavelength of the ripples
- 28** A laser produces a beam of light of wavelength 650 nm. The beam is incident normally on two slits that are a distance of 0.12 mm apart.

A screen is placed parallel to the slits. The bright interference fringes on the screen have a separation of 7.5 cm.

What is the distance between the screen and the two slits?

- A** 1.4 m **B** 2.8 m **C** 7.0 m **D** 14 m