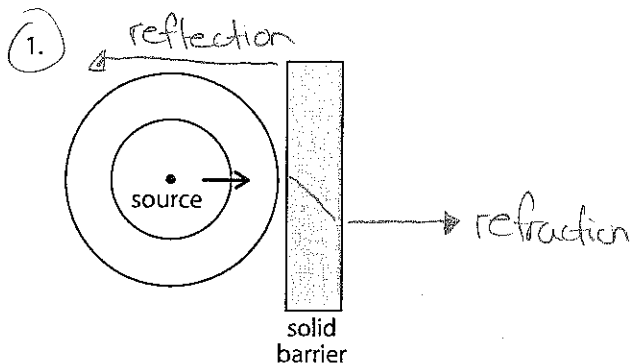
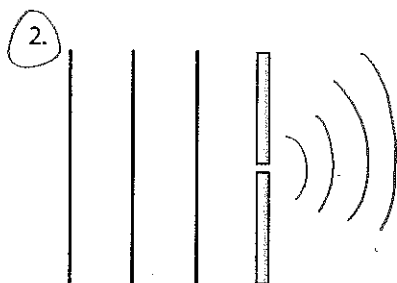


## 6.2 Review Questions

Complete these diagrams to show what happens to waves after they encounter the barrier or other obstacle. Name the phenomenon that occurs in each situation.



refraction/reflection  
phenomenon

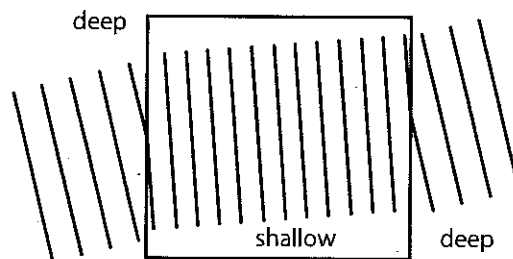


diffraction  
phenomenon

✖ If you look at streetlights through a fine mesh curtain, you will see a "starburst" effect. What phenomenon is involved in this situation?

\_\_\_\_\_ phenomenon

4. Use the following diagram to answer the questions below.



(a) The diagram shows water waves in a wave tank moving from deep water into shallow water and then back into deep water. What property of waves does this model illustrate?

refraction

✖ (b) According to the diagram, what can you conclude happens to the waves when they enter the shallow water?

5. For the following situations, is there a point where the amplitude will be zero everywhere? If so, mark that point.

(a) no in phase

(b) in phase NO

(c) yes

(d) NO

(e) NO

(f) YES

6. For which of the following waves can wave interference occur?

- sound
- light
- water

7. For which of the following waves can the Doppler effect occur?

- sound
- light
- water

8. Does the Doppler effect occur if you are moving and the object making the noise is stationary? Explain your answer.

The Doppler still occurs but you would not hear it

9. What can you conclude about the speed of an airplane overhead if you hear a sonic boom?

The airplane is travelling faster than sound and created a shock wave.

10. What is the difference between a sonic boom and the sound barrier?

speed of sound = sound barrier

Sonic boom occurs when something travels faster than the speed of sound

11. Draw two waves travelling toward each other that will create destructive interference when they meet.

