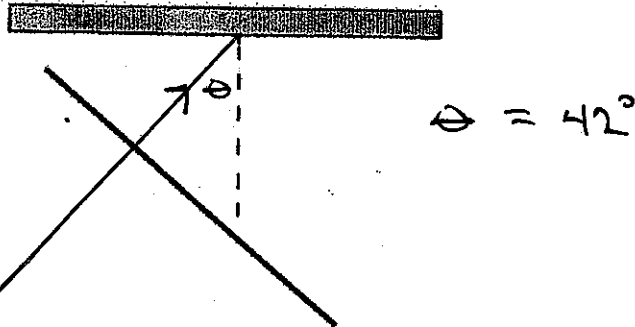
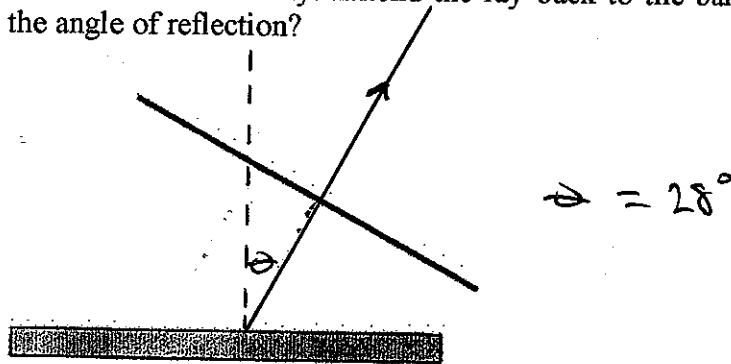


### Waves Worksheet # 5

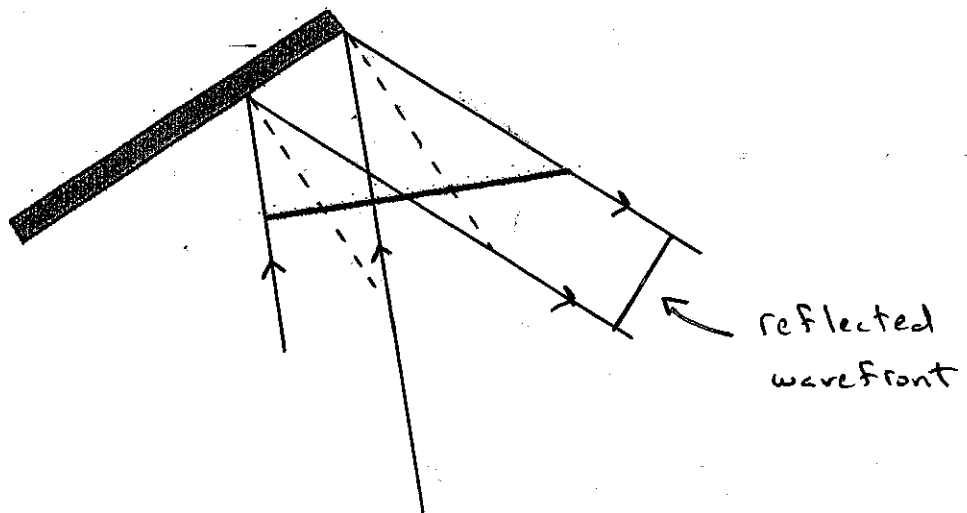
- The diagram below shows a wavefront moving upwards to the right approaching a barrier. For this wavefront, draw in the incident wave ray. Draw in the normal. What is the angle of incidence?



- The diagram below shows a wavefront traveling away from a barrier (upwards to the right). For this wavefront, draw in the reflected wave ray. Extend the ray back to the barrier and draw in the normal. What is the angle of reflection?

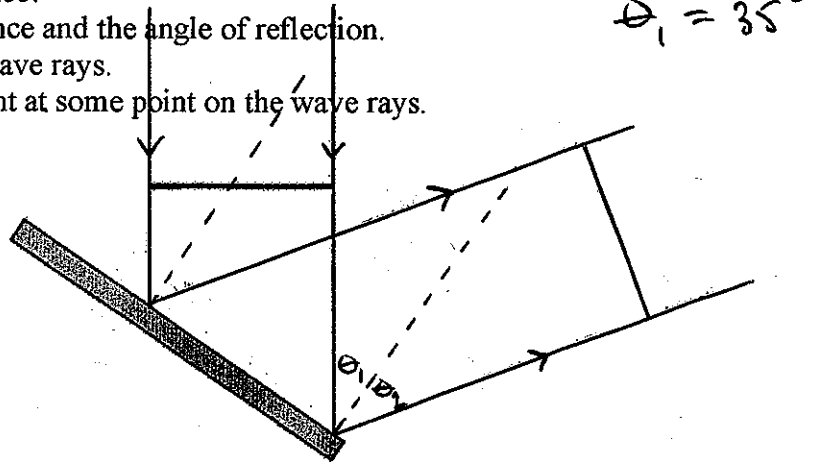


- The diagram below shows one wavefront approaching (moving upwards to the left) a straight barrier. Draw in the reflected wavefront.

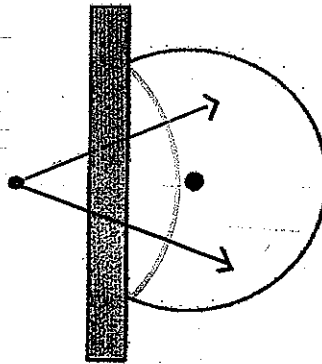


4. The diagram below shows one wavefront moving downward approaching a straight barrier. Add to this diagram the following.

- Draw the incident wave rays from the left edge and the right edge of the wavefront.
- Using a dashed line, draw a normal from the point where each incident ray makes contact with the barrier.
- What is the angle of incidence?
- Draw in the angle of incidence and the angle of reflection.
- Draw in the two reflected wave rays.
- Draw the reflected wavefront at some point on the wave rays.



5. The diagram below shows a circular wave approaching a barrier. The center of the wave is shown. Draw that part of the wave that has been reflected. Also draw a wave ray for the reflected wave from the place where the reflected wavefront seems to originate.



6. The diagram below shows a parabolic reflector. The focal point of the reflector is shown. Circular pulses are generated from the focal point. Draw two incident wavefronts and two reflected wavefronts. Add to the diagram an incident ray and a reflected ray.

