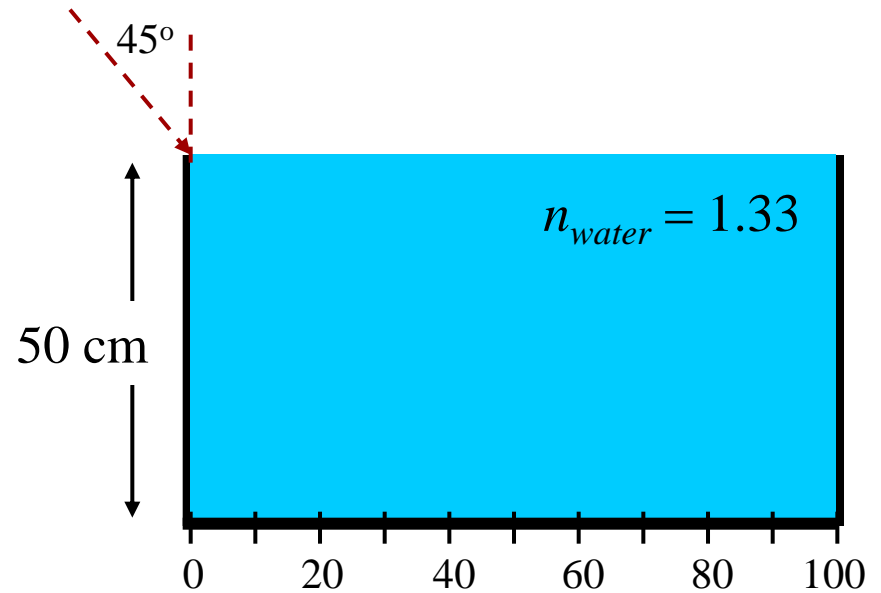# Exercise

A meter stick lies at the bottom of a rectangular water tank of height 50cm. You look into the tank at an angle of 45° relative to vertical along a line that skims the top edge of the tank.

What is the smallest number on the ruler that you can see?

45°

$n_{water} = 1.33$

50 cm

0   20   40   60   80   100

Conceptual Analysis:

- Light is refracted at the surface of the water

Strategy:

- Determine the angle of refraction in the water and extrapolate this to the bottom of the tank.