1. The underground kerosene tank shown below is vented to the atmosphere as shown. Water has been mistakenly added to the tank, and it sinks to the tank bottom due to its greater density. If the tank contents are at 20°C, what are the gage pressures at the tank bottom and at the kerosene-water interface?

Ans: $p_{\text{interface}} = 4.97 \text{ kPa gage}$, $p_{\text{bottom}} = 25.04 \text{ kPa gage}$

2. The enclosed tank shown below has a Bourdon type gage measuring fluid gage pressure at the top of the tank. The water and air in the tank are at 80°F. Find (a) the height $h$ that the water rises in the tube connected two feet below the water-air interface inside the tank (b) the gage pressure at the bottom corners of the tank (points A and B), and (c) the absolute pressure at the tank top, given outside air is at standard atmospheric pressure 14.7 psi.

Ans: (a) 18.2 ft, (b) $p_A = p_B = 8.73 \text{ psig}$, (c) 21.7 psia