Geankoplis 2.2-11

a) Suppose that on summer vacation you decided to do some deep-sea diving. It is recommended that inexperienced divers not go below 100 ft underwater. Calculate the hydrostatic pressure at this point in kPa and psig, assuming the pure water to have similar properties at standard conditions.

b) Suppose that you decided to go deep-sea diving in the Dead Sea, where water may exhibit a nominal density of 1.24 g/cm3. Calculate the hydrostatic pressure 100 ft underwater in the Dead Sea in kPa and psig. How does your answer differ from Part (a)? What is the percent difference between the two hydrostatic pressures? (Note that we are ignoring temperature effects in this problem).