

1. A U-tube (open at both ends) contains mercury. When 11.2 cm of water is poured into the right side, how high does the mercury in the left side rise above its initial level?

Answer: 0.412 cm

2. A swimming pool has dimensions 80 ft x 30 ft x 8.0 ft. When it is filled with water, what is the force of the water acting (a) on the bottom, (b) on one long side, and (c) on one end?

Answer: (b) 7.1×10^5 N

3. A tin can has a total volume of 1200 cm^3 and a mass of 130 g. How many grams of lead shot could it carry without sinking in water? The density of lead is 11.4 g/cm^3 .

Answer: 1070 g