1. In this module, you will plan a diving trip. You will need to know estimates of the pressure changes that you will experience. For example, if you estimate reaching depths of 200 ft (61.0 m). The density of freshwater is 1000 kg/m3, calculate the pressure at this depth.
2. A hydraulic lift system has two pistons. Piston 1 has an area of 20 cm2 and Piston 2 has an area of 5,000 cm2. If a car that weighs 4000 N is placed on Piston 2, how much force must be applied to Piston 1 to lift it?
3. You are designing a hydraulic lift system. You would like to lift a car that has a mass of 500 kg with a maximum force of 25 N. If the piston the car will rest on has an area of 500 cm2, what should the area of the other piston be?