1. (*) What is the hydrostatic force exerted by water on a rectangular wall 60 m wide, 40 m tall which is submerged vertically so that the top is 10 m below the surface? (The density of water in the metric system is 1000 kg/m^3. Use 9.8 m/s^2 for the acceleration due to gravity.)

2. (**) What is the hydrostatic force exerted by water on a triangular wall with base 5 ft. and height 4 ft., which is submerged vertically so that the top is 1 ft. above the surface? (In the English system, the weight density of water is 62.5 lb./ft.^{3}.)

3. (**) A tank is designed with ends in the shape of the region between the curves $y = \dfrac{1}{2}x^2$ and $y = 12$, measured in feet. Find the hydrostatic force on one end of the tank if it is filled to a depth of 8 ft. with gasoline. (Use 42 lb./ft.^{3} for the weight density of gasoline.)

4. (**) A diving pool has a circular observation window of radius 2 meters whose center is at a depth of 3 meters. Set up an integral for the hydrostatic force on the window. If you have time, evaluate the integral.