

Physics Interactive Quiz : Fluids and Solids

Name: _____

#	4	question	Answer			0	<--score
# 1	200	square centimeters is the area each of Dr. Bill's car tires touches the pavement on level ground. If the pressure in each tire is 32 psi and 1 atm is 14.7 psi, what is the real pressure in each tire?		46.7	100	0	
# 2	200	What is the area of each footprint in square inches?		31.0001	100	0	
# 3	200	What is the force in pounds exerted by each tire on the pavement?		1447.7	100	0	
# 4	200	What is the total weight in pounds for Dr. Bill's car?		5790.81	100	0	
# 5	80	liters of air is pumped into a submerged balloon. Find the buoyant force delivered by the balloon in freshwater.		784	100	0	
# 6	80	Find the buoyancy of the balloon in seawater of specific gravity 1.200		940.8	100	0	
# 7	240	meters is the depth of a water tank. Find the velocity of water coming out of a hole in the tank's bottom.		68.5857	100	0	
# 8	240	find the pressure in the bottom of the tank in Pascals (above atmospheric pressure)		2352000	100	0	
# 9	8	cm is the radius of a cork pushed into a barrel of wine with 10 N force. How much pressure force is exerted on the wall of the barrel, with radius 1 meter?		1562.5	100	0	
# 10	1600	kg is the mass of a 6 meter diving board with a 100 kg person on the end, and supports 2 meters apart. Find the force on the center support.		26460	100	0	

Constants: Density of water is $1 \text{ ee } 3 \text{ kg/m}^3$
Extra Credit: Explain subclavian steal