

# Physics Interactive Quiz : Fluids and Solids

Name:

#	1	question	Answer			0	<--score
# 1	50	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	50	What is the area of each footprint in square inches?		7.75	100	0	
# 3	50	What is the force in pounds exerted by each tire on the pavement?		361.93	100	0	
# 4	50	What is the total weight in pounds for Dr. Bill's car?		1447.7	100	0	
# 5	20	liters of air is pumped into a submerged balloon. Find the buoyant force delivered by the balloon in freshwater.		196	100	0	
# 6	20	Find the buoyancy of the balloon in seawater of specific gravity 1.200		235.2	100	0	
# 7	60	meters is the depth of a water tank. Find the velocity of water coming out of a hole in the tank's bottom.		34.293	100	0	
# 8	60	find the pressure in the bottom of the tank in Pascals (above atmospheric pressure)		588000	100	0	
# 9	2	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?		25000	100	0	
# 10	400	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.		8820	100	0	

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