

**MEMO**

**To:** Mission Planning Staff  
**From:** Jim McFarlane/Monterey Bay Aquarium  
Research Institute  
**Subject:** Pressure at varying ocean depths

I will be out all day on a mission. Please handle the following items while I am gone:

1. In our last mission, mission #2201, we collected samples at several different depths. I have been asked to supply the lab with the pressure at each sample depth. Remember that pressure at sea level is 14.7 pounds per square inch, and that it increases by 14.7 pounds per square inch for every 10 meters of depth. Please fill out the following table:

Sample Number	Sample Type	Depth Sample Taken (meters)	Pressure (pounds/square inch)
2201A	biological	10	
2201B	biological	30	
2201C	geological	70	
2201D	biological	80	
2201E	water sample	150	
2201F	geological	190	

2. Please draw a line graph that shows the pressures you calculated for each of the given depths. Plot depth in meters on the horizontal axis and pressure in pounds per square inch on the vertical axis.

3. We went all the way to the bottom on this mission, to 700 meters. What would you predict was the pressure at that depth, based on the above data?

4. It would be helpful to have a general rule for computing the pressure at a given depth. Try to figure out such a rule and test it with some of the pressures you calculated for mission #2201.