1. An enclosed volume of 2000 cm$^3$ water is subjected to a pressure decrease of 2\times10^6$ N/m$^2$. Determine the volume after the pressure is decreased.  
**Ans:** 2002 cm$^3$  

2. A common technique for measuring surface tension is a DuNuoy ring tensiometer depicted in the figure to the right. For a standard circular platinum-irridium ring with diameter of 6 cm and a wire cross-section (defined by the black circles) of 6 mm, what tension force (top arrow and sum of the outer and inner forces) should be measured. Note that the inner and outer forces are the resultant of distributed forces around inner and outer circles.  
**Ans:** 0.0137 N