MAE221 Thermodynamics Lab – Lab 1.3 ***(20 Marks)***

Name:

Lab Day:

1. Maximal inspiratory pressure (MIP) and maximal expiratory pressure (MEP) are global measures of maximal strength of respiratory muscles and they are respectively the greater pressure which may be generated during maximal inspiration and expiration. For an adult, the MEP is around 100 cm H2O, and MIP is around 80cm H2O, please calculate the MEP and MIP using Pascal and psi as unit.

2. Fill out the following chart using measured data with units.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Run No | MEP using multimeter | MIP using multimeter | MEP using photon | MIP using photon |
| 1 |  |  |  |  |
| 2 |  |  |  |  |
| 3 |  |  |  |  |
| 4 |  |  |  |  |
| 5 |  |  |  |  |

3. Discuss your results (how do your lungs compare to your lab mates? how do they compare to the average human? what recommendations would you make to improve the experiment?)