

Name_

Magdeburg Hemispheres Worksheet

Data

Diameter of Magdeburg hemisphere: _____

Force required to separate the hemispheres, Trial 1:

Force required to separate the hemispheres, Trial 2:

Force required to separate the hemispheres, Trial 3:

Post-Lab Calculations and Questions

- 1. Calculate the average force required to separate the hemispheres.
- 2. Calculate the inside area bounded by the circumference of the Magdeburg hemispheres. *Hint:* The area of a circle is πr^2 .
- 3. Calculate the pressure holding the Magdeburg hemispheres together just before they separate. Convert the pressure to pounds per square inch (psi).
- 4. Just before the Magdeburg hemispheres separate, what "occupies" the space inside the stretched hemispheres?
- 5. What causes the loud "pop" when the two hemispheres separate?

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