*NAME: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_ Section: \_\_\_\_\_\_\_\_\_\_\_*

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| ***Directions*** | |
|  | 1. **Review Presentation - 3.2.3 Fluid Pneumatic Power** 2. **Answer the following questions by filling in the boxes with relevant info.** 3. **Please be sure to Type the right answer and show the units!** 4. **Hand it in to your instructor** |
| ***Questions*** | |

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| Pascal’s Law |
| How much pressure can be produced with a 1.00 in. diameter (d) cylinder and 75.0 lb of force (F)? Hint: Use the pressure value as is for Pascal’s Law. |
| * psi= |

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| Boyle’s Law |
| A cylinder is filled with 60 in3 of air at a gauge pressure of 120. psi. The cylinder is compressed to 10 in3.  What is the resulting absolute pressure? Hint: Boyle’s Law must use ABSOLUTE PRESSURE |
| * psi= |

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| Charles' Law |
| An expandable container is filled with 40 in3 of air and is sitting in ice water that is 15°F. The container is removed from the icy water and is heated to 150.°F.  What is the resulting volume? Hint: Charles’ Law must use ABSOLUTE TEMP |
| * in3= |

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| Gay-Lussac’s Law |
| A 200 in3 sealed air tank is sitting outside. In the morning the temperature inside the tank is 45°F, and the pressure gauge reads 120 lb/in2. By afternoon the temperature inside the tank is expected to be close to 85.°F.  What will the absolute pressure be at that point? Hint: Gay-Lussac’s Law must use both ABSOLUTE PRESSURE and ABSOLUTE TEMP |
| * psi= |
| What is the final gauge pressure? |
| * psi= |