***ENGR 13300 Fall 2020***

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| **Section number** | |
| **Assignment** | Ex2_Ind_Task 4 |

Academic Integrity Statement: I/We have not used material obtained from any other unauthorized source, either modified or unmodified. Neither have I/we provided access to my/our work to another. The solution I/we am/are submitting is my/our own original work.

**Problem Description** I am to calculate the pressure using the formula Pv=nRT

**Input Section:**

| degrees(F) | degrees(K) | Cube length(cm) |
|---|---|---|
| 40 | =CONVERT(\$A16,"F","K") | 10 |
| =A16+5 | =CONVERT(\$A17,"F","K") | =C16+5 |
| =A17+5 | =CONVERT(\$A18,"F","K") | =C17+5 |
| =A18+5 | =CONVERT(\$A19,"F","K") | =C18+5 |
| =A19+5 | =CONVERT(\$A20,"F","K") | =C19+5 |
| =A20+5 | =CONVERT(\$A21,"F","K") | =C20+5 |
| =A21+5 | =CONVERT(\$A22,"F","K") | =C21+5 |

**Calculation Section:**

| Pressure(atm) |
|---|
| =(4.6*0.08205*\$B16)/(\$C16)^3 |
| =(4.6*0.08205*\$B17)/(\$C17)^3 |
| =(4.6*0.08205*\$B18)/(\$C18)^3 |
| =(4.6*0.08205*\$B19)/(\$C19)^3 |
| =(4.6*0.08205*\$B20)/(\$C20)^3 |
| =(4.6*0.08205*\$B21)/(\$C21)^3 |
| =(4.6*0.08205*\$B22)/(\$C22)^3 |

**Output Section:**

Which of the following options has the most effect on pressure?
- o Option 1: Change the temperature by 5 degrees F.
- o Option 2: Change the side length by 5 cm.

Option 2 has more effect on pressure. Let's use row 16 as an example, if we change it to 45 degrees F, the answer is 0.105821. Comparing to the answer in cell E16, theres not much difference. However, if we change the cube length to 15, the pressure is 0.031044, which is very different from cell E16.