Mt. Everest Adiabatic Lapse Rate

Directions: Use the data you recorded in the Perpetual Planet Data Table and follow the steps below to see how the data calculates compared to average outlined by the adiabatic lapse rate.

Step 1: Calculate the difference between the stations elevations.

Base Camp - Phortse = ____________

Camp II - Base Camp = ____________

South Col - Camp II = ____________

Balcony - South Col = ____________
Step 2: Calculate the difference between average temperatures at each station elevations.

\[
\begin{align*}
\text{Base Camp} - \text{Phortse} &= \_ \\
\text{Camp II} - \text{Base Camp} &= \\
\text{South Col} - \text{Camp II} &= \\
\text{Balcony} - \text{South Col} &= 
\end{align*}
\]

Step 3: Average the differences between average temperatures at each station elevations.

\[
\begin{align*}
\_ + \_ + \_ + \_ &= \\
\_ / 4 &= 
\end{align*}
\]

Step 4: Does this value approximate the adiabatic lapse rate which states that the temperature decrease by approximately one degree Celsius for every 100 meters (or approximately one degree Fahrenheit for every 150 feet) gained in elevation?

__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________