Name _____

In a sample of 10 winters the mean January temperature is 42° F and the standard deviation is 6° F. What is the 95% confidence interval on the true mean January temperature? Fill in the box below.

1. Desired confidence level is [ ]%
2. The null hypothesis states that the true mean is between [ ] ± ΔT. The alternative is the outside of this region.
3. We will use t-statistic (two-tail test).
4. The degree of freedom is [ ]. The standard error is, SE = [ ] °F. Using MATLAB, the critical t-value is calculated as
   >> tcrit = tinv([ ], [ ])
   >> tcrit = 2.26
   The value of ΔT is [ ]°F.
5. Thus the confidence interval is [ ] < μ < [ ].