(10 points - 15 minutes)
5. The following data are "random" measurements of responses to eight different "treatments". An incomplete Analysis of Variance table is given. Use the data to complete the ANOVA table (but do not include a p-value). Then use the results in your your table to carry out the appropriate test of the claim that the true means of the eight populations are all equal.
(Use $\alpha=0.025$ for this test)

|  |  |  |  |  | tment |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | A | B | C | D | E | F | G | H |
|  | 107 104 97 100 105 102 101 96 | $\begin{array}{r} 100 \\ 98 \\ 93 \\ 95 \end{array}$ | $\begin{array}{r} 108 \\ 95 \\ 102 \\ 99 \\ 98 \\ 96 \\ 96 \end{array}$ | 104 101 109 98 97 89 103 | $\begin{array}{r} 101 \\ 100 \\ 101 \\ 106 \\ 95 \end{array}$ | $\begin{array}{r} 96 \\ 97 \\ 103 \\ 99 \\ 100 \\ 105 \\ 108 \\ 97 \end{array}$ | $\begin{aligned} & 111 \\ & 104 \\ & 112 \\ & 110 \\ & 119 \end{aligned}$ | $\begin{aligned} & 110 \\ & 117 \\ & 115 \\ & 109 \end{aligned}$ |
|  |  |  | Sam | Statis | or ea | eatm |  |  |
| Mean | 101.5 | 96.5 | 99.1 | 100.1 | 100.6 | 100.6 | 111.2 | 112.8 |
| Std. Dev. | 3.82 | 3.11 | 4.56 | 6.34 | 3.91 | 4.31 | 5.36 | 3.86 |
| N | 8 | 4 | 7 | 7 | 5 | 8 | 5 | 4 |

Mean = 102.25
$\mathrm{H}_{1}$ : $\qquad$

Ho: $\qquad$

Analysis of Variance

| Source | df | SS | MS |
| :---: | :---: | :---: | :---: |
| Treatments |  | 158.81 |  |
| Error |  |  |  |

Total
1959.0

