Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Due:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Activity 10-4**

2. After we run each *t* test, use the results to complete the following table.

|  |  |  |  |
| --- | --- | --- | --- |
|  | Independent | Matched | Repeated |
| Number of people in the study (and number of data points) |  |  |  |
| *df* | (*n*1 − 1) + (*n*2 − 1) | (*N* − 1) | (*N* − 1) |
| Observed mean difference |  |  |  |
| Estimate of sampling error |  |  |  |
| Obtained *t* value |  |  |  |
| Sig. (*p* value) |  |  |  |
| Reject or fail to reject (use α = .05) |  |  |  |
| *d* |  |  |  |

Which design has the smallest estimate of sampling error? Explain why.

1. Which design has the largest obtained t value? Explain why.
2. Which type of design is probably the best choice for studying the effect of physical position on heart rate? Explain why.