Name: _____ **Class:** _____ **Date:** _____ **ID: A**

practice midterm 2

Multiple Choice
Identify the choice that best completes the statement or answers the question.

____ 1. Which of the following research situations is most likely to use an independent-measures design?
a. Evaluate the effectiveness of a pain reliever by measuring how much pain is reduced after taking the medication.
b. Evaluate the effectiveness of a cholesterol medication by comparing cholesterol levels before and after the medication.
c. Evaluate the difference in self-esteem between student athletes and non-athletes
d. Evaluate the development of verbal skills between age 2 and age 3 for a sample of girls.

____ 2. The results of an independent-measures study produce a t statistic with df = 36. How many individuals participated in the entire study?
a. 37
b. 38
c. 73
d. 74

____ 3. If the null hypothesis is true, what value is expected on average for the repeated-measures t statistic?
a. 0
b. 1
c. 1.96
d. $t > 1.96$

____ 4. On average, what value is expected for the F-ratio if the null hypothesis is true?
a. 0
b. 1.00
c. $k - 1$
d. $N - k$

____ 5. The results of a repeated-measures ANOVA are reported as follows, $F(3, 27) = 1.12$, $p > .05$. How many subjects participated in the study?
a. 40
b. 36
c. 10
d. 9

Name: _____ **ID: A**

Other

6. A researcher used an analysis of variance to compare three treatment conditions with a separate sample of n = 8 participants in each treatment. The results of the analysis are shown in the following summary. Fill in all missing values in the table. (Hint: Start with the df values.)

Source	SS	df	MS	
Between Treatments	____	____	____	F = 4
Within Treatments	63	____	____	
Total	____	____		

7. One advantage of the repeated-measures ANOVA is that it eliminates "individual differences" as a source of variability. Explain why there are no individual differences in the numerator and in the denominator of the F-ratio.