1. When testing for the difference between 2 population variances with sample sizes of N1 = 8 and N2 = 10, the number of degrees of freedom are

a. 8 and 10

b. 7 and 9

c. 18

d. 16

2. TABLE 10-4. A real estate company is interested in testing whether, on average, families in Gotham have been living in their current homes for less time than families in Metropolis have. Assume that the two population variances are equal. A random sample of 100 families from Gotham and a random sample of 150 families in Metropolis yield the data on length of residence in current homes. Referring to Table 10-4, what is(are) the critical value(s) of the relevant hypothesis test if the level of significance is 0.01?

Gotham: XG= 35 months, SG2= 900 Metropolis: XM= 50 months, SM2= 1050

a. t.Z= -1.96

b. t.Z= + or – 1.96

c. t.Z= -2.080

d. t.Z= -2.33

3. TABLE 10-4. A real estate company is interested in testing whether, on average, families in Gotham have been living in their current homes for less time than families in Metropolis have. Assume that the two population variances are equal. A random sample of 100 families from Gotham and a random sample of 150 families in Metropolis yield the data on length of residence in current homes. Referring to Table 10-4, what is(are) the critical value(s) of the relevant hypothesis test if the level of significance is 0.05?

Gotham: XG= 35 months, SG2= 900 Metropolis: XM= 50 months, SM2= 1050

a. t.Z = -1.645

b. t.Z = + or – 1.96

c. t.Z = -1.96

d. t.Z = -2.080

4. TABLE 10-2. Referring to Table 10-2, the researcher was attempting to show statistically that the female MBA graduates (Population 1 Sample) have a significantly lower mean starting salary than the male MBA graduates. From the analysis in Table 10-2, the correct test statistic is:

|  |  |
| --- | --- |
| Hypothesized Difference | 0 |
| Level of Significance | 0.05 |
| Population 1 Sample |  |
| Sample Size | 18 |
| Sample Mean | 48266.7 |
| Sample Standard Deviation | 13577.63 |
| Population 2 Sample |  |
| Sample Size | 12 |
| Sample Mean | 55000 |
| Sample Standard Deviation | 11741.29 |
| Difference in Sample Means | -6733.3 |
| t-Test Static | -1.40193 |
| Lower-Tail Test |  |
| Lower Critical Value | -1.70113 |
| p-Value | 0.085962 |

a. 0.0860

b. -1.4019

c. -1.7011

d. -6,733.33

5. TABLE 10-2. Referring to Table 10-2, the researcher was attempting to show statistically that the female MBA graduates (Population 1 Sample) have a significantly lower mean starting salary than the male MBA graduates. The proper conclusion for this test is:

|  |  |
| --- | --- |
| Hypothesized Difference | 0 |
| Level of Significance | 0.05 |
| Population 1 Sample |  |
| Sample Size | 18 |
| Sample Mean | 48266.7 |
| Sample Standard Deviation | 13577.63 |
| Population 2 Sample |  |
| Sample Size | 12 |
| Sample Mean | 55000 |
| Sample Standard Deviation | 11741.29 |
| Difference in Sample Means | -6733.3 |
| t-Test Static | -1.40193 |
| Lower-Tail Test |  |
| Lower Critical Value | -1.70113 |
| p-Value | 0.085962 |

a. At the alpha = 0.10 level, there is sufficient evidence to indicate a difference in the mean starting salaries of male and female MBA graduates.

b. At the alpha = 0.10 level, there is sufficient evidence to indicate that females have a lower mean starting salary than male MBA graduates.

c. At the alpha = 0.10 level, there is sufficient evidence to indicate that females have a higher mean starting salary than male MBA graduates.

d. At the alpha = 0.10 level, there is insufficient evidence to indicate any difference in the mean starting salaries of male and female MBA graduates.