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|  |  | | X | | | | | |  | |  | |  | X2 | | | | | | |  | |  | |  | |
|  |  | | Monday | | Wednesday | | Friday | |  | |  | |  | Monday | | Wednesday | | | Friday | |  | |  | |  | |
|  |  | | 1.497 | | 1.506 | | 1.53 | |  | |  | |  | 2.241009 | | 2.268036 | | | 2.3409 | |  | |  | |  | |
|  |  | | 1.492 | | 1.513 | | 1.528 | |  | |  | |  | 2.226064 | | 2.289169 | | | 2.334784 | |  | |  | |  | |
|  |  | | 1.513 | | 1.501 | | 1.519 | |  | |  | |  | 2.289169 | | 2.253001 | | | 2.307361 | |  | |  | |  | |
|  |  | | 1.498 | | 1.511 | | 1.519 | |  | |  | |  | 2.244004 | | 2.283121 | | | 2.307361 | |  | |  | |  | |
|  |  | | 1.483 | | 1.522 | | 1.531 | |  | |  | |  | 2.199289 | | 2.316484 | | | 2.343961 | |  | |  | |  | |
|  |  | | 1.511 | | 1.5 | | 1.514 | |  | |  | |  | 2.283121 | | 2.25 | | | 2.292196 | |  | |  | |  | |
|  |  | | 1.508 | | 1.51 | | 1.515 | |  | |  | |  | 2.274064 | | 2.2801 | | | 2.295225 | |  | |  | |  | |
|  |  | | 1.487 | | 1.496 | | 1.522 | |  | |  | |  | 2.211169 | | 2.238016 | | | 2.316484 | |  | |  | |  | |
|  |  | | 1.485 | | 1.508 | | 1.517 | |  | |  | |  | 2.205225 | | 2.274064 | | | 2.301289 | |  | |  | |  | |
|  |  | | 1.493 | | 1.514 | | 1.53 | |  | |  | |  | 2.229049 | | 2.292196 | | | 2.3409 | |  | |  | |  | |
|  | **Tc** | | 14.967 | | 15.081 | | 15.225 | | **(X)2** | | 2049.645 | |  |  | |  | | | **X2** | | 68.32681 | |  | |  | |
|  | **nc** | | 10 | | 10 | | 10 | | **n** | | 30 | |  |  | |  | | | **(X)2/n** | | 68.32148 | |  | |  | |
|  | **AVGc** | | 1.497 | | 1.508 | | 1.523 | | **(X)2/n** | | **68.32148** | |  |  | |  | | | **SSTo** | | **0.005327** | |  | |  | |
|  | **T2c** | | 224.0111 | | 227.436561 | | 231.8006 | |  | |  | |  |  | |  | | | **SST** | | **0.003343** | | 2 | | 0.0016716 | |
|  | **T2c / nc** | | 22.40111 | | 22.7436561 | | 23.18006 | | **(T2c / nc)** | | 68.32483 | |  |  | |  | | | **SSE** | | **0.001984** | | 27 | | 7.3463E-05 | |
|  |  | |  | |  | |  | | **(X)2/n** | | 68.32148 | |  |  | |  | | |  | |  | | F | | 22.7543232 | |
|  |  | |  | |  | |  | | **SST** | | **0.003343** | |  |  | |  | | |  | |  | | F-test | | 3.35413083 | |
|  |  | |  | |  | |  | |  | |  | |  |  | |  | | |  | |  | |  | |  | |
|  | |  | |  | |  | |  | |  | |  | | |  | |  |  | |  | |  | |  | |
|  | |  | |  | |  | |  | |  | |  | | |  | |  |  | |  | |  | |  | |
|  | |  | |  | | Monday | | | | Wednesday | | | | | Friday | | |  | | TOTALS | |  | |  | |
|  | |  | |  | | X | | X2 | | X | | X2 | | | X | | X2 |  | |  | |  | |  | |
|  | |  | |  | | 1.497 | | 2.241009 | | 1.506 | | 2.268036 | | | 1.53 | | 2.3409 |  | |  | |  | |  | |
|  | |  | |  | | 1.492 | | 2.226064 | | 1.513 | | 2.289169 | | | 1.528 | | 2.334784 |  | |  | |  | |  | |
|  | |  | |  | | 1.513 | | 2.289169 | | 1.501 | | 2.253001 | | | 1.519 | | 2.307361 |  | |  | |  | |  | |
|  | |  | |  | | 1.498 | | 2.244004 | | 1.511 | | 2.283121 | | | 1.519 | | 2.307361 |  | |  | |  | |  | |
|  | |  | |  | | 1.483 | | 2.199289 | | 1.522 | | 2.316484 | | | 1.531 | | 2.343961 |  | |  | |  | |  | |
|  | |  | |  | | 1.511 | | 2.283121 | | 1.5 | | 2.25 | | | 1.514 | | 2.292196 |  | |  | |  | |  | |
|  | |  | |  | | 1.508 | | 2.274064 | | 1.51 | | 2.2801 | | | 1.515 | | 2.295225 |  | |  | |  | |  | |
|  | |  | |  | | 1.487 | | 2.211169 | | 1.496 | | 2.238016 | | | 1.522 | | 2.316484 |  | |  | |  | |  | |
|  | |  | |  | | 1.485 | | 2.205225 | | 1.508 | | 2.274064 | | | 1.517 | | 2.301289 |  | |  | |  | |  | |
|  | |  | |  | | 1.493 | | 2.229049 | | 1.514 | | 2.292196 | | | 1.53 | | 2.3409 |  | |  | |  | |  | |
|  | |  | | **Tc** | | 14.967 | |  | | 15.081 | |  | | | 15.225 | |  |  | | 45.273 | | **(X)2** | |  | |
|  | |  | | **nc** | | 10 | |  | | 10 | |  | | | 10 | |  |  | | 30 | | **n** | |  | |
|  | |  | | **T2c / nc** | | 22.40111 | |  | | 22.7436561 | |  | | | 23.18006 | |  |  | | 68.32483 | | **(T2c / nc)** | |  | |
|  | |  | | **X2** | |  | | 22.40216 | |  | | 22.744187 | | |  | | 23.18046 |  | | 68.32681 | | **X2** | |  | |
|  | |  | |  | |  | |  | |  | |  | | |  | |  |  | |  | |  | |  | |
|  | |  | |  | |  | |  | |  | |  | | |  | |  |  | |  | |  | |  | |
|  | |  | |  | |  | |  | |  | |  | | |  | |  |  | | 68.32681 | | **X2** | |  | |
|  | |  | |  | |  | |  | |  | |  | | |  | |  |  | | 68.32148 | | **(X)2/n** | |  | |
|  | |  | |  | |  | |  | |  | |  | | |  | |  |  | | 0.005327 | | **SSTo** | |  | |
|  | |  | |  | |  | |  | |  | |  | | |  | |  |  | | 68.32483 | | **(T2c / nc)** | |  | |
|  | |  | |  | |  | |  | |  | |  | | |  | |  |  | | 68.32148 | | **(X)2/n** | |  | |
|  | |  | |  | |  | |  | |  | |  | | | MST | | 0.001672 | 2 | | 0.003343 | | **SST** | |  | |
|  | |  | |  | |  | |  | |  | |  | | | MSE | | 7.35E-05 | 27 | | 0.001983 | | **SSE** | |  | |
|  | |  | |  | |  | |  | |  | |  | | | F | | 22.75432 |  | |  | |  | |  | |
|  | |  | |  | |  | |  | |  | |  | | | F-test | | 3.354131 |  | |  | |  | |  | |
|  | |  | |  | |  | |  | |  | |  | | |  | |  |  | |  | |  | |  | |
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|  | |  | |  | |  | |  | |  | |  | | |  | |  |  | |  | |  | |  | |
|  | |  | | ANOVA TABLE | | **STANDARD FORMAT** | | | |  | |  | | |  | |  |  | |  | |  | |  | |
|  | |  | | *Source of Variation* | | *SS* | | *df* | | *MS* | | *F* | | | *F crit* | |  |  | |  | |  | |  | |
|  | |  | | Treatments | | SST | | k - 1 | | SST/(k-1) = MST | | MST/MSE | | | F(α, k-1, n-k) | |  |  | |  | |  | |  | |
|  | |  | | Error | | SSE | | n - k | | SSE/(n-k)=MSE | |  | | |  | |  |  | |  | |  | |  | |
|  | |  | |  | |  | |  | |  | |  | | |  | |  |  | |  | |  | |  | |
|  | |  | | Total | | SSTo | | n - 1 | |  | |  | | |  | |  |  | |  | |  | |  | |
|  | |  | |  | |  | |  | |  | |  | | |  | |  |  | |  | |  | |  | |
|  | |  | |  | | **EXAMPLE DATA** | | | |  | |  | | |  | |  |  | |  | |  | |  | |
|  | |  | | ANOVA TABLE | | | |  | |  | |  | | | 0.05 | |  |  | |  | |  | |  | |
|  | |  | | *Source of Variation* | | *SS* | | *df* | | *MS* | | *F* | | | *F crit* | |  |  | |  | |  | |  | |
|  | |  | | Treatments | | #REF! | | 2 | | #REF! | | #REF! | | | 3.354131 | |  |  | |  | |  | |  | |
|  | |  | | Error | | #REF! | | 27 | | #REF! | |  | | |  | |  |  | |  | |  | |  | |
|  | |  | |  | |  | |  | |  | |  | | |  | |  |  | |  | |  | |  | |
|  | |  | | Total | | #REF! | | 29 | |  | |  | | |  | |  |  | |  | |  | |  | |
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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Monday | Wednesday | Friday |  |  |  |  |  |  |  |  |  |
| 1.497 | 1.506 | 1.53 |  | Anova: Single Factor | |  |  |  |  |  |  |
| 1.492 | 1.513 | 1.528 |  |  |  |  |  |  |  |  |  |
| 1.513 | 1.501 | 1.519 |  | SUMMARY |  |  |  |  |  |  |  |
| 1.498 | 1.511 | 1.519 |  | *Groups* | *Count* | *Sum* | *Average* | *Variance* |  |  |  |
| 1.483 | 1.522 | 1.531 |  | Monday | 10 | 14.967 | 1.4967 | 0.000117 |  |  |  |
| 1.511 | 1.5 | 1.514 |  | Wednesday | 10 | 15.081 | 1.5081 | 5.9E-05 |  |  |  |
| 1.508 | 1.51 | 1.515 |  | Friday | 10 | 15.225 | 1.5225 | 4.43E-05 |  |  |  |
| 1.487 | 1.496 | 1.522 |  |  |  |  |  |  |  |  |  |
| 1.485 | 1.508 | 1.517 |  |  |  |  |  |  |  |  |  |
| 1.493 | 1.514 | 1.53 |  | ANOVA |  |  |  |  |  |  |  |
|  |  |  |  | *Source of Variation* | *SS* | *df* | *MS* | *F* | *P-value* | *F crit* |  |
|  |  |  |  | Between Groups | 0.003343 | 2 | 0.001672 | 22.75432 | 1.61E-06 | 3.354131 |  |
|  |  |  |  | Within Groups | 0.001983 | 27 | 7.35E-05 |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | Total | 0.005327 | 29 |  |  |  |  |  |
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