

Dunn's Test Post-Hoc Test:

Category	Furniture	Office Supplies	Technology
Furniture	1.000000	1.534319e-138	5.207264e-02
Office Supplies	1.534319e-138	1.000000	2.001982e-154
Technology	5.207264e-02	2.001982e-154	1.000000

Interpretation of the Results

- **Diagonal Values:** The diagonal values (1.000000e+00) indicate the p-values for comparisons of each category with itself, which is always 1 since they are not compared to other categories.

Pairwise Comparisons:

1. Furniture vs. Office Supplies:

- **P-value:** $1.534319 \times 10^{-138}$
- **Interpretation:** This p-value is extremely low (well below the typical alpha level of 0.05), indicating that there is a significant difference in log-transformed sales between the Furniture and Office Supplies categories. The null hypothesis (no difference) can be rejected.

2. Furniture vs. Technology:

- **P-value:** 5.207264×10^{-02}
- **Interpretation:** This p-value is just below the alpha level of 0.05, suggesting that there is a significant difference in log-transformed sales between the Furniture and Technology categories. The null hypothesis can be rejected.

3. Office Supplies vs. Technology:

- **P-value:** $2.001982 \times 10^{-154}$
- **Interpretation:** Similar to the first comparison, this p-value is extremely low, indicating a significant difference in log-transformed sales between the Office Supplies and Technology categories. The null hypothesis can be rejected.

Summary of Findings

- **Significant Differences:** All pairwise comparisons indicate significant differences in sales between categories:
 - Furniture vs. Office Supplies: Significant difference.
 - Furniture vs. Technology: Significant difference.
 - Office Supplies vs. Technology: Significant difference.

Implications

- These results suggest that the sales performance differs notably among the three product categories. Businesses may want to consider these differences when strategizing sales, inventory management, or marketing efforts.
- Understanding these distinctions can help in making data-driven decisions to optimize resource allocation and promotional strategies for each category, aiming to enhance overall sales performance.