**Question 1 Answer:**

**Holt-Winters Exponential Smoothing** was the preferred method because it specifically focuses on capturing seasonality and trends in data. It provides reliable projections for data that exhibit regular patterns, which is why it worked well with this dataset. The model effectively smoothed out fluctuations while capturing the seasonality of the revenue, making its projections more consistent. Also, after evaluating the metrics, it was a clear candidate, and it was tuned enough without worrying about overfitting. Not to mention, give that Holts-Winter is better with additive and multiplicative data, it didn’t surprise me that it performed better.

I will add, unlike the Question Two answer, it isn’t nearly as technical, because there is so much here and I did everything I could to visualize the data in a way that was more apparent. Whereas the other Question I did not have nearly the same amount of outputs. Feel free to reach out to me any time, and sorry, this was a probably a little overkill, but I have a lot of experience in this subject-matter, due to my current positon.

**Question 2 Answer:**From the analysis, the total shipping costs increased substantially, rising from $146,145.69 in 2017 to $238,678.37 in 2018—a 63% increase—despite the existence of a better contract. This increase occurred even though the average billed weight actually decreased slightly, from 4.25 lbs in 2017 to 4.02 lbs in 2018. This suggests that weight was not a major factor in the cost rise.

The zone distribution of shipments remained largely consistent between the two years, with Zones 2, 3, 4, and 5 handling the bulk of the shipments. However, there was a noticeable rise in shipments to Zone 7, increasing from 4% in 2017 to 7% in 2018, which likely contributed to higher costs due to longer shipping distances.

In addition to changes in zone distribution, surcharges and additional fees also played a role in driving up costs. Fuel surcharges almost doubled, going from $0.27 in 2017 to $0.54 in 2018. New fees were introduced in 2018, including additional handling charges and declared value surcharges, further compounding the overall increase in shipping expenses.

Overall, the surge in costs was driven by a combination of increased surcharges, additional handling fees, and a shift toward shipping to more distant zones, particularly Zone 7.