Scenario:

You are being provided some fictitious data that mimics our world of supply and demand in the thrift business. Our stores receive volume of goods donated and then process those goods. They may receive goods donated at the store, which our stores collect on behalf of our Nonprofit Partners or are supplemented by some of our additional vendors via deliveries. Beyond that we may supplement our stores via other methods, like stored inventory created by stores with excess.

What we are asking of you is a few things:

* Create some basic pivot tables so that the executive team can look at the data by month and by year (and by channel if applicable)
* Create some visual line graphs for the calendar year to show the growth year over year and utilizing that % of growth, what would be the expectation for the year coming as an additional line
* Model supply and demand visual and/or numerically
  + When is supply higher than demand and vice versa?
* Create brief power point to illustrate the information you want to convey to executive leadership and discuss any observations you have made

Utilize some of these features in MS Excel (VLOOKUP, XLOOKUP, TEXT, YEAR, MONTH, SUM, DIVIDE, Measures, etc…) or the equivalent in Google Sheets to create a collapsible/expandable pivot tables that do the following:

Pivot Table #1 (Receiving)

* + Create a pivot table with the Volume Received data
  + Create a filter for year (put on 2018 as default)
  + Create a filter for Channel (put OSD’s as default)
  + Create a row hierarchy starting from “Region name” at the top of the hierarchy and “Store name”
  + Create columns for each calendar month (i.e. Jan, Feb, Mar, etc..) and the sum total of the Year at the end
  + Populate the data related to the Region then Store from the Volume Received

Pivot Table #2 (Production)

* + Create a pivot table with Volume Processed data
  + Create a filter for year (put on 2018 as default)
  + a row hierarchy starting from “Region name” at the top of the hierarchy and “Store name”
  + Create columns for each calendar month (i.e. Jan, Feb, Mar, etc..) and the sum total of the Year at the end
  + Populate the rows with data related to the Store & Region from the Volume Processed

Data visualization and MS Power Point (or Good Slides equivalent):

* Show a line graph of year over year growth from 2018 to 2019, then perpetuate that growth to forecast 2020 for each store, region and the sum total of all areas regarding:
  + - Channel type is “On Site Donations” (from Volume Received)
    - Volume Processed
  + Factoring 2018 & 2019 combined:
    - what month(s) are peak season for supply (Volume Received… “On Site Donations” only)
    - what month(s) are peak season for demand (Volume Processed)
* Build a slide about On Site Donation compared to Volume Processed
  + On Site Donations are what helps our stores grow and succeed… With that in mind, show the percentage of the channel type “On Site Donation” (from Volume Received) compared to Volume Processed.
  + Note: If On Site Donations exceed Volume received, then their percentage of Volume Processed is maxed at 100%
  + Use only 2019’s data for both Volume Received and Volume Processed
    - Example #1 (Store A)
      * 1500 On Site Donation Volume Received
      * 1000 Volume Processed
      * Surplus of 500 On Site Donations Volume
      * Volume Processed = 100% On Site Donations
    - Example #2 (Store B)
      * 750 On Site Donation Volume Received
      * 1000 Volume Processed
      * Deficit of 250 On Site Donation Volume
      * Volume Processed = 75% On Site Donations