APOLLO
AGRICULTURE

Logistics & Distribution Lead Analytics Test

Please see the attached data set referring to agrodealer referrals

Part 1

Use the data provided to answer the questions below:

a) Who are our top 10 agrodealers for referrals?
b) Which were our best weeks for referrals?
c) Which was the best day of the week?
d) Are our top agents consistent? By week and by day?
e) Can you give any commentary or recommendations based on what you have seen or further analysis?

Part 2

We need you to design a plan to ensure good planning of agrodealer stock

Below is a list of conditions to model and fulfil

- There are 15 weeks in a season
- We have a 50% chance of adding in a new agrodealer in any given week, and we have a starting point of 250 agrodealers in our network
- We have 10 pickups per agrodealer per week in the first week of the season and this increases by 20% each week until week 10, when it declines by 30% until the last week of the season.
- 60% of pickups take Maize, topdressing and planting fertiliser, and 40% take just maize and planting
- Wholesale costs are as follows:
  o Maize seed : 1200 KES
  o Topdressing Fertiliser: 4500 KES
  o Planting Fertiliser 6000 KES
- No agrodealer can have more than 1,000,000 KES of stock from Apollo at any point in time
- Every agrodealer should always have one day of stock minimum

Please create and share a model to show the following:

Calculate expected amount of pickups for Maize, Topdressing, Planting in both Volume and cost

What is the minimum number of deliveries that would be needed to keep our agrodealers stocked?

How many agrodealers would be open by the end of the season?