Short Exercise

Thank you for expressing your interest in working as part of the Riders Planning and Performance team! Here is a short exercise that we compiled in order to get better visibility of your analytical and creative mindset :)

Feel free to choose your preferred format (pdf, slideshow, doc etc as long as the answers are not written as an email).

Details:

Attached is a table with the expected order distribution times across the day from our warehouse on Tatooine. Each row represents an order. The Order Time column stands for the time that a rider will be assigned to an order. The Return Time column stands for the time that the rider will be back in the warehouse.

Assume the following:

a. Gravity conditions on Tatooine are similar to the ones on Earth and a day is composed of 24 hours.
b. The delivery time count will begin when a rider will be assigned to an order.
c. All orders were delivered within 10 minutes.
d. Orders could be delivered in less than 10 minutes.
e. Each order will be made with one rider and each rider will be able to handle one order at a time.

Questions:

1. According to the data, what is the required rider headcount per hour that will allow us to meet the 10 minutes delivery time?
    a. Please attach a table with the headcount per hour of the day
    b. Please explain the steps you made in order to reach this number. For example, you could do so by attaching your calculations and formulas to the sent table.

2. Which rider KPIs should we measure on the basis of the data in the table?
    a. Mention at least 2 KPIs.
    b. Please present these KPIs with a graph based on the attached data.

3. Suggest at least one algorithm, process, product, vehicle or any other idea you have in mind that could optimize the delivery times and/or the required riders headcount.

Good luck!