# Key Question Answers

1. The sales team needs to know what the busiest days of the week and hours of the day are (i.e., the days and times with the most orders) in order to schedule ads at times when there are fewer orders.
   1. Busiest day of week
      1. orders\_dow\_bar.png
   2. Busiest hours of the day
      1. orders\_hod.png
2. They also want to know whether there are particular times of the day when people spend the most money, as this might inform the type of products they advertise at these times.
   1. **line\_prices\_hod.png**
3. Instacart has a lot of products with different price tags. Marketing and sales want to use simpler price range groupings to help direct their efforts.
   1. price\_range\_groups.csv
4. Are there certain types of products that are more popular than others? The marketing and sales teams want to know which departments have the highest frequency of product orders.
   1. dept\_freq.png
5. The marketing and sales teams are particularly interested in the different types of customers in their system and how their ordering behaviors differ. For example:
   1. What’s the distribution among users in regards to their brand loyalty (i.e., how often do they return to Instacart)?
      1. loyalty\_dist\_pie.png
   2. Are there differences in ordering habits based on a customer’s loyalty status?
      1. No significant differences in regional spread or amounts spent.
         1. loyal\_region\_stkbar.png
      2. Slight variations in departments frequented. New customers more likely to shop dept 1 than other customers.
         1. loyal\_dept\_bar.png
   3. Are there differences in ordering habits based on a customer’s region?
      1. When normalized by regional population, there is no variation in distribution of any customer profile category.
         1. region\_dist\_pie.png
         2. ord\_frq\_region.png
         3. age\_region\_bar.png
         4. income\_region\_bar.png
   4. Is there a connection between age and family status in terms of ordering habits?
      1. Age\_group
         1. Almost identical ordering frequency, mean price, and departmental preference. Adults makes biggest category, thus the largest total contribution.
            1. age\_sums.csv
            2. age\_profile\_pie.png
            3. age\_dept\_bar.png
      2. Family status
         1. No significant difference in ord freq or prices. No diff in dept pref.
            1. fam\_stat\_sums.csv
            2. fam\_stat\_pie.png
            3. fam\_stat\_dept\_bar.png
   5. What different classifications does the demographic information suggest? Age? Income? Certain types of goods? Family status?
      1. Income\_group
         1. High is most frequent, then mid, then low – but only slightly  
            Low tends to buy less expensive items  
            Mid brings in most money – also largest group
            1. income\_group\_sums.csv
            2. income\_profile\_pie.png
         2. Mid and high have similar dept use. Low frequents depts. 7 and 19 significantly more than mid and high.
            1. inc\_depts\_bar.png
      2. Lifestyle Profile based on department usage.
         1. Omnivores shop the most frequently and spend the most per item. Vegans shop the least frequently and spend the least per item.
            1. lifestyle\_sums.csv
         2. Omnivores make up the largest group and vegans the smallest.
            1. lifestyle\_profile\_pie.png
         3. Omnivores 7, 11, 19 less; 9, 12, 15, 16 more  
            Vegetarians 16 more  
            Vegans use 3, 9, 13, 15, 20 less; 5, 7, 11, 17, 19 more  
            4 most used in all
            1. lifestyle\_depts\_bar.png
      3. Baby at home
         1. Those with babies at home make purchases more frequently than those without.
            1. baby\_sums.csv
         2. 31% of users make baby dept purchases
            1. baby\_flag\_pie.png
         3. No babies use dept 7 more
            1. baby\_dept\_bar.png
      4. Alcohol usage
         1. Similar order frequency and price average for both.
         2. 7% of users purchase alcohol
            1. alcohol\_flag\_pie.png
         3. Alcohol users use 4 significantly less; 16, 18 less; 3, 7, 8, 17 more
            1. alochol\_dept\_bar.png
      5. Favorite Shopping Time Periods
         1. Morning shoppers return to Instacart the most frequently, then mid-day and night, midnight shoppers the least.
            1. Make chart in excel fav\_time\_sums.csv
         2. 61% mid-day users
            1. fav\_shop\_time\_pie.png
         3. Midnight shoppers more likely to used dept 1 than others.
            1. midnight\_dept\_bar.png
      6. High/Low Spenders
         1. High spenders make up a very small % of the population
            1. .spender\_pie.png
         2. High spenders make less frequent orders than low spenders
            1. .spender\_sums.csv
         3. High spenders are mor likely to shop in dept 7 and 12; and less likely to shop in dept 4 and 19 than low spenders.
            1. .hilo\_dept\_bar.png