Overview:

As the lead analyst for **Maven Cycles**, you've been tasked with building out a new Power BI reporting solution using data from SQL databases, Excel workbooks, CSV files, and more. Once built, you'll need to distribute this report to key company stakeholders using Power BI Service.

Existing Environment:

Below is a summary of the data used by Maven Cycles for reporting:

Table Name	Column Name	Data Type
Sales	date_id	Integer
	product_id	Integer
	customer_id	Integer
	sales_id	Integer
	region_id	Integer
	stock_date_id	Date
	transactions	Integer
Calendar	date_id	Integer
	date	Date
	year	Integer
	month	Integer
	week	Integer
Regions	region_id	Integer
	region_name	Varchar
	manager_id	Integer
Managers	manager_id	Integer
	full_name	Varchar
	username	Varchar
	email_address	Varchar
Customers	customer_id	Integer
	full_name	Varchar
	email_address	Varchar
	age	Integer
Products	product_id	Integer
	name	Varchar
	brand	Varchar
	unit_cost	Decimal
	unit_price	Decimal
Forecasts	sales_goal	Floating
	date_id	Integer
	region_id	Integer

Additional Context:

- IT recently transitioned to authenticating users using Azure Active Directory
- Transactions in the Sales table indicate a distinct transaction
- Sales goals in the Forecasts table are created for next three quarters
- Date_id in the Calendar table is formatted as *yyyymmdd*
- Month_id in the Calendar table is formatted as yyyymm
- Each region_id in the Regions table is associated with a single manager_id

Reporting Requirements:

- The leadership team would like to be able to see total sales by:
    - Region name *(i.e. "North", "South", "East", "West")*
    - Month *(i.e. "Apr 2021")*
    - Customer Age Group (i.e. "18-24", "25-34", "35-54", "55+")
- The VP of Inventory Management has requested visuals showing:
    - Sales transactions, filterable by transaction date and stock date independently
    - Inventory turnover
- Regional managers have requested visuals showing:
    - Transaction trends *(i.e. YTD, Previous Month, Previous Quarter)*
    - Transactions by product
    - Sales transactions compared to goals
- All regional managers should only be able to see their specific region's performance

Potential Concerns:

With these requirements in hand, you've begun to explore the data and think you've found some potential issues:

- You think there may be negative transaction amounts
- You think there may be inconsistent data types across tables