perplexity

These are the columns in my dataset , give possible definition of these columns

COLUMN_NAME
carat
cut
color
clarity
depth
table
x
y
z
price

Also I want to create a 2 page Power BI report using this data, suggest 5 KPIs for each page along with suitable charts to represent each KPI (Use DAX where ever required)

Definitions of Each Column

Column Name	Possible Definition
carat	Weight of the diamond, measured in carats (1 carat = 0.2 grams). It significantly impacts the diamond's size and price [1] [2] [3].
cut	Grade or quality of the diamond's cut, referring to how well the stone has been shaped and faceted. Affects brilliance and sparkle [1] [2] [4] [3].
color	Grade of the diamond's color, which measures the lack of color in a white diamond (usually graded from D, colorless, to Z, noticeable color) [5] [1] [3].
clarity	Indicator of the presence or absence of internal (inclusions) or external (blemishes) flaws. Ranges from Flawless to Included [1] [6] [2] [3].
depth	The total height of the diamond, measured from the table (top) to the culet (bottom), usually expressed as a percentage of the width. Used in assessing cut quality.
table	Width of the diamond's top facet (table), usually given as a percentage of the diamond's total width. It also plays a role in the cut quality.
x	Length of the diamond in millimeters (often the longest face).
y	Width of the diamond in millimeters (second longest face, perpendicular to x).
z	Height or depth of the diamond in millimeters (from top to bottom).
price	The selling price or appraised value of the diamond, usually in USD.

2-Page Power BI Report Plan with KPIs & Charts

Page 1: Diamond Quality & Physical Characteristics

Suggested KPIs

- **Average Carat**
  - DAX: `AVERAGE(diamonds[carat])`
  - **Chart:** Card visualization
- **Distribution of Cut Grades**
  - DAX: `COUNTROWS(FILTER(diamonds, diamonds[cut] = "Ideal"))` (Repeat for other grades or use clustered bar chart)
  - **Chart:** Stacked Bar Chart or Column Chart
- **Average Depth Percentage**
  - DAX: `AVERAGE(diamonds[depth])`
  - **Chart:** Card visualization
- **Relationship between Carat and Price**
  - DAX not needed; use scatter plot with Carat (X) and Price (Y)
  - **Chart:** Scatter Plot
- **Cut vs. Price Analysis**
  - DAX: `AVERAGE(diamonds[price])` by `diamonds[cut]`
  - **Chart:** Bar or Column Chart

Page 2: Market Value & Color/Clarity Trends

Suggested KPIs

- **Average Price**
  - DAX: `AVERAGE(diamonds[price])`
  - **Chart:** Card visualization
- **Price by Color Grade**
  - DAX: `AVERAGE(diamonds[price])` by `diamonds[color]`
  - **Chart:** Heatmap or Bar Chart
- **Price by Clarity Grade**
  - DAX: `AVERAGE(diamonds[price])` by `diamonds[clarity]`
  - **Chart:** Bar Chart
- **Price Distribution**
  - DAX: not needed; visual representation
  - **Chart:** Histogram

- **Top 10 Most Expensive Diamonds**
  - DAX: `TOPN(10, diamonds, diamonds[price], DESC)`
  - **Chart:** Table

Visualization choices, DAX formulas, and layout can be adjusted further based on audience and business requirements.

⁂

1. https://www.diamonds.pro/education/4cs-diamonds/
2. https://www.grayandsons.com/blog/diamond-grading-explained-cut-clarity-color-carat/
3. https://www.youtube.com/watch?v=Hu1YFUvzlTk
4. https://www.jcpenney.com/m/diamond-4cs-cut-carat-clarity-color
5. https://hiholden.com/blogs/all/cut-color-clarity-carat-defined
6. https://4cs.gia.edu/en-us/diamond-clarity/