Let's talk about analytical thinking.

* **Analytical thinking** involves identifying and defining a problem and then solving it by using data in an organized, step-by-step manner.

As data analysts, how do we think analytically?

Well, to answer that question, we will now talk about a second set of five.

**The five key aspects to analytical thinking.**

* They are visualization, strategy, problem-orientation, correlation, and finally, big-picture and detail-oriented thinking.

Five aspects of analytical thinking:

1. Visualization - graphical representation of information,
2. Strategy - what they want to achieve with the data and how they can get there,
3. problem-orientation - identify, describe, and solve problems,
4. correlation - A correlation is like a relationship between 2 things, and
5. big-picture and detail-oriented thinking - about figuring out all of the aspects that will help you execute a plan.

**Let's start with visualization**.

In data analytics, visualization is the graphical representation of information.

Some examples include graphs, maps, or other design elements.

Visualization is important because visuals can help data analysts understand and explain information more effectively.

Think about it like this.

If you are trying to explain the Grand Canyon to someone, using words would be much more challenging than showing them a picture.

Now let's talk about **the second part of analytical thinking, being strategic**.

With so much data available, having a strategic mindset is key to staying focused and on track.

Strategizing helps data analysts see what they want to achieve with the data and how they can get there. Strategy also helps improve the quality and usefulness of the data we collect.

By strategizing, we know all our data is valuable and can help us accomplish our goals.

Next step on the analytical thinking checklist: being **problem-oriented**.

Data analysts use a problem- oriented approach in order to identify, describe, and solve problems. It's all about keeping the problem top of mind throughout the entire project.

For example, say a data analyst is told about the problem of a warehouse constantly running out of supplies.

They would move forward with different strategies and processes. But the number one goal would always be solving the problem of keeping inventory on the shelves.

Data analysts also ask a lot of questions. This helps improve communication and saves time while working on a solution.

An example of that would be surveying customers about their experiences using a product and building insights from those questions to improve their product.

This leads us to the fourth quality of analytical thinking: **being able to identify a correlation between two or more pieces of data.**

A correlation is like a relationship.

You can find all kinds of correlations in data.

Maybe it's the relationship between the length of your hair and the amount of shampoo you need.

Or maybe you notice a correlation between a rainier season leading to a high number of umbrellas being sold.

But as you start identifying correlations in data, there's one thing you always want to keep in mind:

Correlation does not equal causation.

In other words, just because two pieces of data are both trending in the same direction, that doesn't necessarily mean they are all related.

Now the final piece of the analytical thinking puzzle: **big-picture thinking.**

This means being able to see the big picture as well as the details.

A jigsaw puzzle is a great way to think about this.

Big-picture thinking is like looking at a complete puzzle.

You can enjoy the whole picture without getting stuck on every tiny piece that went into making it. If you only focus on individual pieces, you wouldn't be able to see past that,

which is why big-picture thinking is so important.

It helps you zoom out and see possibilities and opportunities. This leads to exciting new ideas or innovations.

On the flip side, **detail-oriented thinking** is all about figuring out all of the aspects

that will help you execute a plan.

In other words, the pieces that make up your puzzle. There are all kinds of problems in the business world that can benefit from employees who have both a big-picture and a detail-oriented way of thinking.