

3 The ability to reason is an important skill for anyone seeking to succeed in their career and is an
4 important leadership quality. Understanding the different types of reasoning and how to apply them can
5 help you excel as a professional, contribute meaningfully at work and gain the respect of your superiors.
6 In this article, we discuss the concept of reasoning, the seven types of reasoning and when to use each
7 one. **What is reasoning?** Reasoning is the ability to assess things rationally by applying logic based on
8 new or existing information when making a decision or solving a problem. Reasoning allows you to
9 weigh the benefits and disadvantages of two or more courses of action before choosing the one with
10 the most benefit or the one that suits your needs. It also helps you solve problems, handle uncertainty,
11 verify claims and assess situations carefully to ensure the decision you make is in your best interest.
12 Reasoning comes in diverse forms, from everyday decision-making processes to powerful algorithms
13 that power artificial intelligence. You can find formal reasoning in established disciplines such as
14 mathematics, logic, artificial intelligence and philosophy. Throughout all circumstances, however, you
15 can categorize reasoning into seven basic types. Understanding the types of reasoning can help you
16 evaluate and advance your decision-making process. **7 types of reasoning:** Here are seven types of
17 reasoning and examples of situations when they're best used: **1. Deductive reasoning:** Deductive
18 reasoning is a type of reasoning that uses formal logic and observations to prove a theory or hypothesis.
19 In deductive reasoning, you start with an assumption and then make observations or rational thoughts
20 to validate or refute the assumption. You can use deductive reasoning to apply a general law to a
21 specific case or test an induction. The results of deductive reasoning typically have a logical certainty.
22 For example, a marketing division evaluates data and reaffirms that their company's biggest
23 demographic is young parents. Based on this information, they decide to allocate more of the marketing
24 budget to social media platforms that target that group. **2. Inductive reasoning:** Inductive reasoning
25 uses theories and assumptions to validate observations. In some ways it's the opposite of deductive
26 reasoning, as it involves reasoning from a specific case or cases to derive a general rule. The results of
27 inductive reasoning are not always certain because it uses conclusions from observations to make
28 generalizations. Inductive reasoning is helpful for extrapolation, predictions and part-to-whole
29 arguments. For instance, a kindergarten teacher has struggled to hold the attention of her class
30 throughout the morning. She tries adding an extra five-minute activity break one hour after school
31 starts. After a week of mood improvements and attention gains, she decides to permanently add the
32 extra activity break. **3. Analogical reasoning:** Analogical reasoning is a form of thinking that finds
33 similarities between two or more things and then uses those characteristics to find other qualities
34 common to them. It's based on the brain's tendency to notice patterns and make associations. Once the
35 brain recognizes a pattern, it can associate the pattern with specific things, and this leads to analogous
36 reasoning. Analogous thinking can help you expand your understanding by looking for similarities
37 between different things. A supermarket has served as an analogical source for many businesses. When
38 planning a new business, evaluating how to serve customers better, or planning a new line, many
39 business strategists reach for a supermarket analogy to ask if they can provide everything a customer
40 may need when shopping for items in their category. **4. Abductive reasoning:** Abductive reasoning is a
41 type of reasoning that uses an observation or set of observations to reach a logical conclusion. It's
42 similar to inductive reasoning, however, abductive reasoning permits making best guesses to arrive at
43 the simplest conclusions. Abduction has applications in troubleshooting and decision-making, especially
44 when dealing with uncertainties. Abductive reasoning is especially useful when explaining an
45 observation or phenomenon that the observer has very little or no existing knowledge about. The
46 conclusion of abductive reasoning may not always be certain and may require further verification. For
47 example, salespeople may use this type of reasoning when they receive a short correspondence from a
48 client, asking them to reply quickly about an issue. When the client doesn't give enough information to
49 understand before responding, a salesperson can use abductive reasoning to narrow down possible
50 concerns. It's sometimes better to prepare answers for a few best guesses. **5. Cause-and-effect**
51 **reasoning:** Cause-and-effect reasoning is a type of thinking in which you show the linkage between two
52 events. This reasoning is used to explain what may happen if an action takes place or why things happen
53 when some conditions are present. This type of reasoning commonly guides everyday decision-making,

in cases where people draw on personal experience and a desire to improve. Businesses and professionals also use prediction and forecast modeling. This type of reasoning can help people trust your arguments, especially if you are accurate most of the time. For instance, a marketing agency may use cause-and-effect reasoning to prove the value of their campaigns and request an increase in budget. They may show how in the first year they launched an advertising campaign for a product line before Christmas, and the product sales increased by 10%. The following year, they increased the advertising budget 15%, and the product sales increased 25%. Therefore, with a budget increase of 20%, they're expecting a sales increase of 30%.

6. Critical thinking: Critical thinking involves extensive rational thought about a specific subject in order to come to a definitive conclusion. It's helpful in fields such as computing, engineering, social sciences and logic. Critical thinking plays a vital role in problem-solving, especially when troubleshooting technical issues. It's used to assess the authenticity of works of art, literature, films and other artistic expressions. Critical thinking also plays a vital role in mental and emotional matters, gray areas and other fields that deal with subjects less understood. For example, the general manager of a family restaurant learns that a bakery important to its supply chain is about to go on strike. They order extra baked goods to freeze and then plan a distributor they can use during the strike.

7. Decompositional reasoning: Decompositional reasoning is the process of breaking things into constituent parts to understand the function of each component and how it contributes to the operation of the item as a whole. By analyzing each part independently, decompositional reasoning allows an observer to draw powerful conclusions about the whole. You find this approach in several disciplines, including science, engineering, marketing, product development, game development and software development. Project management utilizes decompositional reasoning in its division of a project into components. A manager assigns each component to an individual, who is responsible for completion and communication about integration into the project. This division ensures the success of each component and contributes to the operation of the whole.