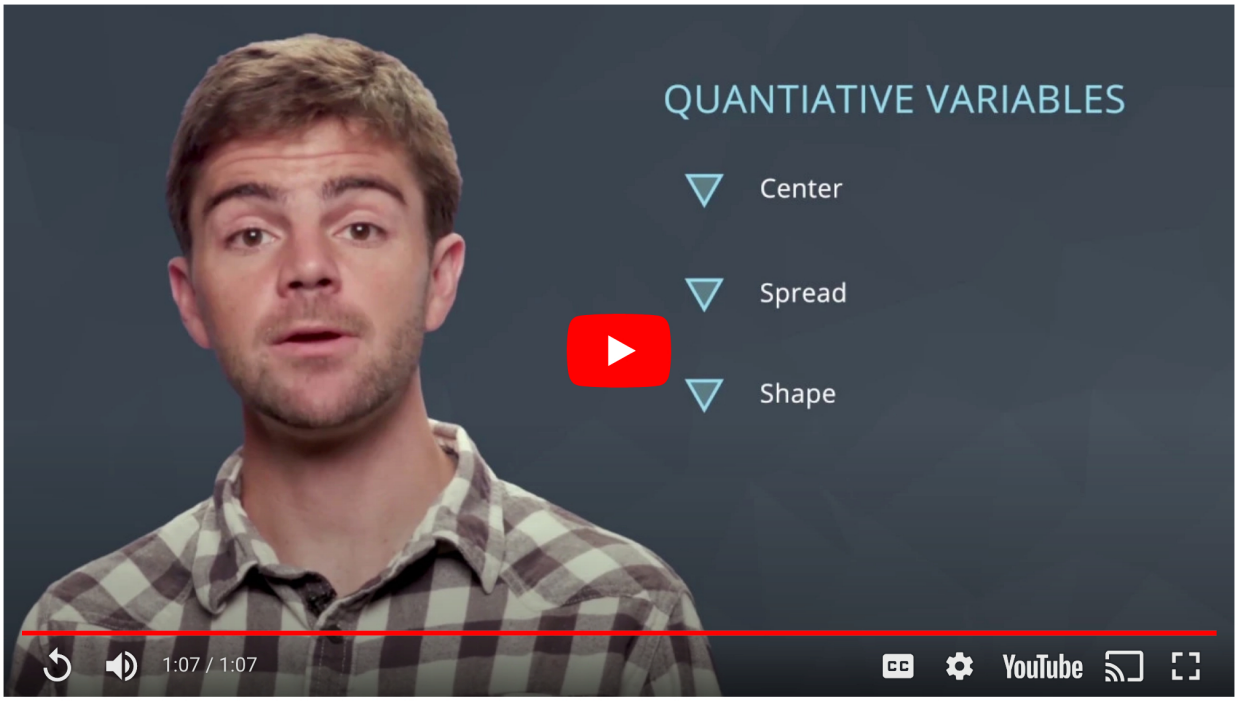
Video: What is Notation?



Notation

Notation is a common language used to communicate mathematical ideas. **Think of notation as a universal language used by academic and industry professionals to convey mathematical ideas.** In the next videos, you might see things that seem confusing. Use the quizzes to assist with your understanding of the concepts.

You likely already know some notation. Plus, minus, multiply, division, and equal signs all have mathematical symbols that you are likely familiar with. Each of these symbols replaces an idea for how numbers interact with one another. In the coming concepts, you will be introduced to some additional ideas related to notation. Though you will not need to use notation to complete the project, it does have the following properties:

1. **Understanding how to correctly use notation makes you seem really smart.** Knowing how to read and write in notation is like learning a new language. A language that is used to convey ideas associated with mathematics.

2. **It allows you to read documentation, and implement an idea to your own problem.** Notation is used to convey how problems are solved all the time. One really popular mathematical algorithm that is used to solve some of the world's most difficult problems is known as Gradient Boosting. The way that it solves problems is explained here: **https://en.wikipedia.org/wiki/Gradient_boosting**. If you really want to understand how this algorithm works, you need to be able to read and understand notation.

3. **It makes ideas that are hard to say in words easier to convey.** Sometimes we just don't have the right words to say. For those situations, I prefer to use notation to convey the message. Similar to the way an emoji or meme might convey a feeling better than words, notation can convey an idea better than words. Usually those ideas are related to mathematics, but I am not here to stifle your creativity.

Supporting Materials

- **Wikipedia on Gradient boosting.**
