



Unit 1

Reason

READING

Most of us have heard the word “logical” before. We use it when we think someone has said something that makes sense; something that seems reasonable or well thought out. *Logic*, the topic of study for which you are reading this assignment, means something very akin to this. We can define it as *the art of correct reasoning*. Let’s look at the parts of that definition more closely.

If something is an *art* it is a set of rules and practices for doing something. Importantly, the difference between an art and a science is that the point of knowing an art is *doing something*, while the point of knowing a science is being wiser – we seek it just so that we have the knowledge. Let’s consider an example of each to help us understand. Consider the knowledge that you gained when someone taught you how to brush your teeth. It probably wasn’t taught as a subject in school. You didn’t learn it because it makes you wiser – more knowledgeable about God, the universe, and everything – rather, you learned it because you need to do it. You need to brush your teeth and you need to do so well. The point of the knowledge is doing the task.

This brings us to the second important word in our definition, *correct*. For an activity to be correct it must be the *right* or *proper* manner of doing things. There is a correct and an incorrect way to do almost anything. There is a correct way to walk, to wear your clothes, to greet your mother, to work out a math problem, and to fly a spaceship. When we do things incorrectly, we find that we usually fail to reach the point of the action; we fail to achieve the goal for which we were doing something in the first place. Consider teeth brushing again. When we do that incorrectly – say, when we only do the front teeth, we don’t bother with toothpaste, and we never brush more than a few seconds – we end up with rotten teeth, rather than our goal, healthy teeth. When we walk incorrectly, we stumble; when we work out math problems incorrectly, we get the wrong answer; and when we fly a spaceship incorrectly, we crash into the moon. You get the point. So, now that we know that logic has to do with doing something and that it is about doing something correctly, we only need to talk about what it is that we are supposed to do correctly. This brings us to *reasoning*.

The first thing we know about reasoning is that it has to do with thinking. When we reason we are doing something with our minds, not our hands or feet. So what does the mind do? The famous Greek philosopher Aristotle thought that the answer was threefold. The mind (1) knows what things are; (2) it judges how one thing is related to another; and (3) it groups judgements together into arguments. We will learn more about these three activities in the coming weeks (and years), but we can summarize

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them all by noticing that have to do with gaining knowledge about the world. Thinking is how people get to the truth.

With this in mind we can fully understand the definition of logic that we learned above. An art is a set or rules and practices for doing something; reasoning is the activity of the mind that brings it to truth; and reasoning correctly means thinking that really makes it to the goal of truth because it is done the right way. This year we will learn a lot about those rules and practices that we should follow in order to ensure that we think in the best ways; and achieve the most truth about things.

READING COMPREHENSION

Answer with complete sentences.

1. What does it mean to be “logical”?

2. What is an art?

3. What is the point of knowing a science?

4. What does it mean to be correct?

5. What is reasoning?

KEY CONCEPTS

Define these terms carefully.

Logic:

IN-CLASS WORK

Write down and complete the problems covered in class here. Be neat!

FOLLOW-UP WORK

Complete these problems. Be neat!

State whether each of the following can be studied as an art. If you think it can, write down what you think the goal of the art would be – what would the art allow you to do when it is done correctly?

1. Skinning a deer

2. Biology

3. Bird Watching

4. Astronomy

5. Algebra

6. Combing your hair

7. Theology

8. Dancing

State whether each of the following shows "correct reasoning."

1. $2 + 2 = 4$

2. All A is B, All B is C, therefore, All A is C

3. If all my dogs are blue and the dog in my truck is one of mine, then the dog in my truck is blue.

4. $78 - 34 = 54$

5. All pigs are stinky. George is a pig. So, George is stinky.

6. Nobody loves me. Everybody hates me. I guess I'll go eat worms.
