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Introduction



Exercises for Day 1. Read the entire chapter. You may read it fairly quickly on this first reading. Don't expect to understand everything you read. Try only to get a general idea of what the chapter is about. Next, read the beginning sections of the introduction: "The History of Logic" and "The Two Main Branches of Logic." Read these sections carefully and try to fully understand them.

1. Based on what you have read in this chapter, what is the definition of 'logic'?
Logic is the science of right thinking.

2. Who was called the "father of logic"? Aristotle

3. Who laid the groundwork for modern symbolic logic? Chrysippus

4. Give the name of one philosopher who made advances in symbolic logic.
Gottfreid Wilhelm Leibniz

5. Who pioneered the theories about induction that we study today? John Stuart Mill

6. Give the names of three people whose names are associated with modern kinds of mathematical logic.
 1. Gottlob Frege

 2. Alfred North Whitehead

 3. Bertrand Russell

7. Give the names of the two main branches of logic.
 1. formal or "minor" logic

 2. material or "major" logic

8. Explain the first of the main branches of logic (in Question 7), and describe it in your own words.
Formal logic is interested in the form or structure of reasoning.

9. Explain the second of the main branches of logic (in Question 7), and describe it in your own words.
Material logic is concerned with the content of argumentation. It deals with the truth of the terms and the propositions in an argument.

10. Indicate whether the following statements are true or false:
 - F a. The purpose of formal logic is to discover truth.
(The purpose of formal logic is to lead us from one truth to another.)
 - F b. It is necessary to have logic in order to discover truth.
(Formal logic is useful only if we already have truths with which to use logic.)
 - T c. Logic leads us from one truth to another.
 - T d. A statement can be true or false.
 - F e. A statement can be valid or invalid.
(Statements can only be true or false.)
 - F f. An argument can be true or false.
(Arguments can only be valid or invalid.)

Exercises for Day 3. Read “Term” and “Proposition.”

17. Each of these logical processes (in Question 16 above) originates in a mental act and manifests itself in the form of a verbal expression.

18. What is the mental act involved in the first of the three kinds of logical processes?
Simple apprehension.

19. What is the verbal expression connected to this mental act (in Question 18)? Term

20. What occurs in our minds when we have a simple apprehension?
We form in our minds a concept of something.

21. If you think of this book and have the concept in your mind, you are having a simple apprehension. What is the term you use to verbally express this particular simple apprehension?
Book (Term would also be acceptable.)

22. Name the terms included in the argument in Question 15 above.
Men; mortal; and Socrates

23. What does each one of these terms (in Question 22) represent?
A concept

24. What is the mental act involved in the second of the three kinds of logical processes?
Judgment

25. What is the verbal expression connected to this mental act (in Question 24)?
Proposition

26. What occurs in our minds when we perform a judgment?
We perform a judgment any time we think in our minds that something is something else (which we call affirmation), and also when we think that something is not something else (which we call denial).

27. If you think that this book is boring by affirming in your mind that this is so, your mind is performing a judgment. What is the term you use to verbally express this judgment?
Proposition

28. Indicate the propositions included in the argument in Question 15 above.
“All men are mortal”; “Socrates is a man”; and “Socrates is mortal.” (You do not have to include the word ‘therefore’ in the last proposition.)

29. What does each one of these propositions (in Question 28) represent?
A judgment

Exercises for Day 4. Read “Syllogism” and “Summary.” Read them carefully.

30. What is the mental act involved in the third of the three kinds of logical processes?

Deductive inference

31. What is the verbal expression connected to this mental act (in Question 30)?

Syllogism

32. Describe in no less than one and no more than three sentences what occurs in our minds when we engage in deductive inference.

A deductive inference occurs when we make the logical connections in our minds between the terms in the argument in a way that shows us that the conclusion either follows or does not follow from the premises. (or something similar)

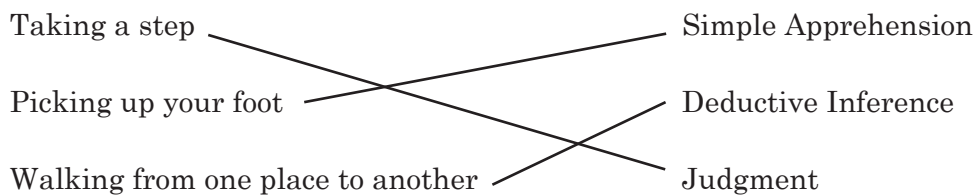
33. If you think that because all books are boring and that this is a book, and that therefore this book is boring, your mind engaged in deductive inference. What is the term you use to verbally express this deductive inference?

Syllogism

34. Fill out the chart below, listing the mental acts and their corresponding verbal expressions in the order in which we have covered them:

Mental Act	Verbal Expression
Simple Apprehension	Term
Judgment	Proposition
Deductive Inference	Syllogism

35. Draw a line to indicate which action best describes what each mental act is like:



Chapter 1: What Is Simple Apprehension?



Exercises for Day 1. Read the entire chapter. You may read it fairly quickly on this first reading. Try only to get a general idea of what the chapter is about. Read the beginning sections of Chapter 1: “What Is Simple Apprehension?” and “What Is Sense Perception?” Read these sections carefully and try to understand them as best you can.

1. What are the three things associated with simple apprehension?

First, we perceive something with our senses; second, we form an image of it in our mind; and, third, we form a concept of it.

2. Which one of the three parts of the answer to Question 1 is the simple apprehension itself?

The third: we form a concept of it.

3. Which two of the three answers in Question 1 are connected with simple apprehension, but are not simple apprehension itself?

The first and second: perceiving something with our senses and forming an image of it in our minds.

4. Which one of the three things associated with simple apprehension (in Question 1) is present when we are looking at something with our eyes, but ceases once we are no longer looking at it?

The first: the perception of something with our senses.

5. Why is the sense perception of a chair different from the chair itself?

Because the sense perception occurs in our minds, while the chair exists outside of our minds.

6. What is the definition of ‘sense perception’?

Sense perception is the act of seeing or hearing or smelling or tasting or touching.

Exercises for Day 2. Read “What Is a Mental Image?” Read it carefully.

7. What happens in your mind when you have a sense perception?

We form a mental image.

8. When you remember something you have seen, say, a chair, are you having a sense perception or a mental image?

A mental image

9. Give one reason why a mental image of a chair must be different from the sense perception of the chair. While the sense perception lasts only as long as we are looking at the chair, the mental image can be present even when we are not perceiving the chair through our senses.
-
-
-

10. What is the definition of 'mental image'?
- A mental image is the image of an object formed in the mind as a result of a sense perception of that object.
-
-
-

Read "What Is a Concept?"

11. What are you having when you understand the general concept of a chair?
- Simple apprehension
-
12. Is the simple apprehension you experience when you understand the general concept of an object, such as a chair, the same as or different from the sense perception you experience when looking at a chair or the mental image in your mind that results from the sense perception?
- Different
-

13. Give one reason why a mental image must be different from simple apprehension itself. While a mental image is representative of something tangible and material (for example, it has shape and color), simple apprehension is the grasp of something intangible and immaterial.
-
-
-
-

14. What is the definition of 'simple apprehension'?
- Simple apprehension is an act by which the mind grasps the general concept of an object without affirming or denying anything about it.
-
-
-

15. What is another term used for simple apprehension?
- Concept
-

Exercises for Day 3. Read "Concept vs. Image." Read it carefully.

16. What do we grasp when we have a simple apprehension of a thing?
- We grasp the essence of the thing.
-
-

17. If you have a mental image in your mind when you think of the concept 'man,' and someone else has a different mental image, does that mean you are each thinking of a different concept? Explain, using the concept 'man.'

When we think of the concept 'man,' we may have some kind of image in our mind, such as an actual man, tall, with blond hair, blue eyes, and light skin. But when someone else thinks of the concept 'man,' he may have a completely different image in his mind. He may think of an actual man who is short, with dark hair, brown eyes, and dark skin. Although the mental images we have when we think of the concept 'man' are completely different, that doesn't mean that we do not both understand the same concept 'man.' We may have exactly the same understanding of what man is, yet have completely different mental images that we associate with it. (or something similar)

18. Offer an explanation for your answer in Question 17 above, only this time use an example other than that of 'man.'

(This answer should be similar to the one in 17, only using another concept.)

Read "Abstraction."

19. What is the definition of the term 'abstraction'?

The process by which a simple apprehension is derived from a sense perception or mental image is called abstraction.

Review Exercises.

22. What is the definition of 'logic'?

Logic is the science of right thinking.

23. On the basis of last week's reading, define 'truth.'

Truth is correspondence to reality.

24. Name the three types of logical processes (or acts of the mind) involved in logic.

Simple apprehension, judgment, deductive inference

25. Fill out the chart below, listing the mental acts and their corresponding verbal expressions in the order in which we have covered them:

Mental Act	Verbal Expression
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Judgment	Proposition
Deductive Inference	Syllogism