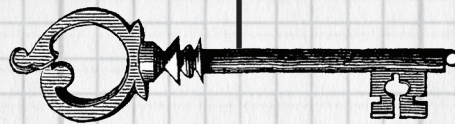


INTRODUCTORY LOGIC

The Fundamentals of Thinking Well

TEST and QUIZ PACKET: FIFTH EDITION

Canon Logic Series



INTRODUCTORY LOGIC | QUIZ 1
Introduction and Lessons 1–3 (30 points)

Name _____

1. What is *logic*?

2. Name the two branches of formal logic.

3. State the *Law of Identity*.

4. Give an example of an ambiguous word, and write two different lexical definitions of it.

5. What does it mean that a word is *vague*? What type of definition reduces vagueness?

6. *Human: an evolved ape*. What type of definition is this? Briefly defend your answer.

7. *The state lottery is a tax for people who are bad at calculating odds*. What type of definition is this?

8. What type of definition gives a new meaning to a word?

Problems 9–10: Fill in the blanks for the given term, identifying a) a genus, b) another species under that genus, and c) a species of the given term.

9. *finger* a) _____

b) _____

c) _____

10. *to break* a) _____

b) _____

c) _____

11. What is the *extension* of a term?

12. Arrange in order of decreasing intension: OBJECT, SLINKY, TOY

INTRODUCTORY LOGIC | QUIZ 2

Lessons 4–5 (23 points)

Name _____

Problems 1–3: Define the word by synonym.

1. *stone* _____

2. *to rescue* _____

3. *lovely* _____

4. What is one limitation of defining by synonym?

Problems 5–6: Define the word by example. Remember to include a variety.

5. *sport* _____

6. *religion* _____

7. We can define a word by example by listing species of it. What is another way to define by example?

Problems 8–10: What is the primary error made by the given definition?

8. *yacht*: a vessel used for yacht racing. _____

9. *to shave*: to truncate the prosopic stubble. _____

10. *socks*: garments for the feet other than shoes. _____

Problems 11–12: Write a proper genus and difference definition for the given term.

11. *driveway* _____

12. *to whisper* _____

INTRODUCTORY LOGIC | Test 1, Form A
Introduction and Lessons 1–5 (52 points)

Name _____

1. What is *logic*?

2. State the *Law of Excluded Middle*.

3. What is the primary difference between *formal logic* and *informal logic*?

Problems 4–7: Write the letter corresponding to the type of definition in the blank next to its description:

A. Lexical B. Precising C. Stipulative D. Theoretical E. Persuasive

4. A definition that reduces the vagueness of a term in a given situation. _____

5. A definition that removes ambiguity by giving an established meaning of a term. _____

6. A definition that is meant to influence one's attitude about the term. _____

7. A definition which supplies the meaning of a new term. _____

8. Arrange these terms in order of *decreasing extension*: ALGEBRA, MATH, SUBJECT

9. Arrange these terms in order of *increasing intension*: AUTOMOBILE, DRAGSTER, VEHICLE

10. One method of defining terms is by genus and difference. Name two other methods of defining terms, and then define the term "house" using each method.

Genus and difference _____

Problems 11–12: Fill in the blanks for the given term, identifying (a) a genus, (b) another species under that genus, and (c) a species of the given term.

11. *lock* a) _____

b) _____

c) _____

12. *cake* a) _____

b) _____

c) _____

13. Write out the six rules for defining terms by genus and difference. “A definition must...”

RULE 1 _____

RULE 2 _____

RULE 3 _____

RULE 4 _____

RULE 5 _____

RULE 6 _____

Problems 14–17: Explain the primary error made by the given genus and difference definition.

14. *clang*: a cacophonous tintinnabulation.

15. *bed*: anything used as a bed.

16. *truck*: an automobile that is not a car.

17. *victory*: to defeat the opposition.

Problems 18–20: Define the given term by genus and difference definition. Do not break any of the rules.

18. *stranger* _____

19. *coin* _____

20. *to reason* _____

INTRODUCTORY LOGIC | Test 1, Form B
Introduction and Lessons 1–5 (54 points)

Name _____

1. Logic is defined as “the science and the art of reasoning well.” What is *reasoning*?

2. State the *Law of Noncontradiction*.

3. The conclusions of inductive arguments are strong or weak. What type of argument has a valid or invalid conclusion?

4. One of the purposes of lexical definitions is to eliminate ambiguity. What does it mean that a word is *ambiguous*?

5. What is the other purpose of lexical definitions besides “to remove ambiguity”?

6. What is the purpose of precisising definitions?

7. Write a persuasive definition for the word *summer* from the point of view of a student at the beginning of the school year.

8. Arrange these terms in order of *increasing extension*: COMPUTER, DEVICE, LAPTOP

9. Arrange these terms in order of *decreasing intension*: BIBLE, BOOK, KING JAMES BIBLE

10. One method of defining terms is by genus and difference. Name two other methods of defining terms, and then define the term “ball” using each method.

Genus and difference _____

Problems 11–12: Fill in the blanks for the given term, identifying (a) a genus, (b) another species under that genus, and (c) a species of the given term.

11. *boat* a) _____
 b) _____
 c) _____

12. *flower* a) _____
 b) _____
 c) _____

13. Write out the rules for defining terms by genus and difference. The first is done for you.

RULE 1 *A definition must state the essential attributes of the term.*

RULE 2 _____

RULE 3 _____

RULE 4 _____

RULE 5 _____

RULE 6 _____

Problems 14–17: Explain the primary error made by the given genus and difference definition.

14. *child*: a person who is as young as a child.

15. *school*: the place children gather in different rooms on weekdays, except during summer.

16. *tiny*: a very small thing.

17. *planet*: a celestial body that is not a moon, comet, or star.

Problems 18–20: Define the given term by genus and difference definition. Do not break any of the rules.

18. *nightmare* _____

19. *mask* _____

20. *to spit* _____

INTRODUCTORY LOGIC | Quiz 3
Lessons 6–8 (17 points)

Name _____

1. What are the possible truth values of a statement?

2. A question is a sentence. Why is a question not a statement?

3. Other than questions, what are two other types of sentences that are not statements?

4. What is a *self-supporting* statement?

Problems 5–12: Identify the type of statement by writing the corresponding letter in the blank. There should be one of each.

- | | |
|-----------------------|----------------------------|
| A. Self-report | E. False by definition |
| B. Tautology | F. Supported by authority |
| C. Self-contradiction | G. Supported by experience |
| D. True by definition | H. Supported by deduction |

5. The sun is often visible at night. _____
6. The printing on this page is black. _____
7. You either know the answer or you do not. _____
8. The breeze is a gentle wind. _____
9. The number 51 is divisible by 3. _____
10. In the beginning, God created the heavens and the earth. _____
11. I believe in God the Father, maker of heaven and earth. _____
12. This is the last question on this quiz, but it is not the last question on this quiz. _____

INTRODUCTORY LOGIC | Quiz 4
Lessons 9–11 (22 points)

Name _____

1. What are *consistent* statements? _____

Problems 2–4: Consider the statement “Some dragons breathed fire.”

2. Rewrite the given statement so that it uses only the verb of being.

3. Write a statement that *implies* the given statement.

4. Write a statement that is *logically equivalent* to the given statement.

Problems 5–8: Consider the statement “No real men eat quiche.”

5. Rewrite the given statement so that it uses only the verb of being.

6. Write a statement that is *logically equivalent* to the given statement.

7. Write a statement that is *inconsistent* with the given statement.

8. Write a statement that is *independent* of the given statement but has the same predicate.

9. Give an example of an *apparent disagreement* about ice cream.

10. Give an example of a *real disagreement* about ice cream.

11. What kind of disagreement is prevented by clearly defining terms?

INTRODUCTORY LOGIC | Test 2, Form A
Lessons 6–11 (45 points)

Name _____

1. Define *statement*. _____
2. Give an example of a sentence that is not a statement.

3. What is a *supported statement*? _____

Problems 4–7: Give an example of the given type of statement.

4. self report: _____
5. tautology: _____
6. self-contradiction: _____
7. false by definition: _____

Problems 8–12: Four relationships between statements are *consistency*, *implication*, *equivalence*, and *independence*. Circle YES or NO to answer the questions about the given statements.

8. Are the two statements *consistent*?
 - a. Pianos are stringed instruments. / Pianos are not stringed instruments. YES NO
 - b. The wind is blowing. / Soon it will snow. YES NO
 - c. Some carpenters are preachers. / Some carpenters are not preachers. YES NO
 - d. No men eat dessert. / Some men eat dessert. YES NO
9. Does the first statement *imply* the second statement?
 - a. All musicians are poets. / Rock musicians are poets. YES NO
 - b. Boys are created in God's image. / Everyone is created in God's image. YES NO
 - c. Only policemen may speed. / Race car drivers may speed. YES NO
 - d. Some amphibians are frogs. / Some frogs are amphibians. YES NO
10. Are the two statements logically *equivalent*?
 - a. Lizards are reptiles. / Reptiles are lizards. YES NO
 - b. No students are teachers. / No teachers are students. YES NO
 - c. All derbies are caps. / Some derbies are caps. YES NO
 - d. Some fruits are oranges. / Some oranges are fruits. YES NO

11. Are the two statements logically *independent*?
- | | | |
|--|-----|----|
| a. Bill is taller than Sally. / Sally is shorter than Bill. | YES | NO |
| b. Boys always eat dessert. / Boys never eat dessert. | YES | NO |
| c. Peter was a fisherman. / Paul was a Pharisee. | YES | NO |
| d. Some picnics are outings. / Some picnics are not outings. | YES | NO |
12. Can two statements be inconsistent and independent? YES NO
13. What is a verbal disagreement?

14. Give an example of an apparent disagreement.

Problems 15–18: Rewrite the given statement so that it uses only the verb of being.

15. Mere talk leads to poverty.

16. Snowy days are peaceful.

17. Many people will go to church tomorrow.

18. The soldiers fought bravely.

INTRODUCTORY LOGIC | Test 2, Form B
Lessons 6–11 (45 points)

Name _____

1. What is a *statement*? _____
2. What are three types of sentences that are not statements?

3. What is a *tautology*?

4. Write a statement that is supported by *authority*.

Problems 5–7: Give an example of the given type of statement.

5. Self-contradiction: _____
6. Self-report: _____
7. True by definition: _____

Problems 8–12: Four relationships between statements are *consistency*, *implication*, *equivalence*, and *independence*. Circle YES or NO to answer the questions about the given statements.

8. Are the two statements *consistent*?
 - a. My teacher wears glasses. / My teacher has poor eyesight. YES NO
 - b. It snows every winter. / Some winters it does not snow. YES NO
 - c. You get up every morning. / You could be a musician. YES NO
 - d. Some books are electronic devices. / No books are electronic devices. YES NO
9. Does the first statement *imply* the second statement?
 - a. Jack is Jill's brother. / Jill has a brother. YES NO
 - b. Everybody loves me. / My mother loves me. YES NO
 - c. Jesus preached in Nazareth. / Jesus preached in Jerusalem. YES NO
 - d. No Jews are Gentiles. / No Gentiles are Jews. YES NO

10. Are the two statements logically *equivalent*?
- | | | |
|--|-----|----|
| a. All humans are mammals. / All mammals are humans. | YES | NO |
| b. Some teachers are parents. / Some parents are teachers. | YES | NO |
| c. No rugs are carpets. / No carpets are rugs. | YES | NO |
| d. Tom has the measles. / Tom is ill. | YES | NO |
11. Are the two statements logically *independent*?
- | | | |
|--|-----|----|
| a. It is later than 1:00 PM. / It is later than 2:00 PM. | YES | NO |
| b. Saturn is a planet. / Saturn was the Roman god of time. | YES | NO |
| c. Some siblings are twins. / Some siblings are not twins. | YES | NO |
| d. Jesus turned the water into wine. / Jesus performed miracles. | YES | NO |
12. Can two statements be related by implication and inconsistency? YES NO
13. In logic, what is a real disagreement?
-
14. What is an apparent disagreement, and how does it differ from a verbal disagreement?
-
-

Problems 15–18: Rewrite the given statement so that it uses only the verb of being.

15. I look to the sea.
-
16. The angels sang to the shepherds.
-
17. The president will take an oath.
-
18. Some carpenters do not preach the gospel.
-