**Exercises for Chapter 4**

1. What are the two kinds of relationships statements can have to one another?
2. What do we mean in logic when we speak of opposition?
3. Express the Rule of Contradition.
4. Tell the quality and quantity of the A statement.
5. Tell the quality and quantity of the O statement.
6. Does the A statement contradict the O statement? If so, explain why; if not, explain why not.
7. Which other pair of statements are contradictory to one another?
8. Place an **X** in front of the pairs of statements that are contradictory.

 All men are mortal. No men are mortal

 Some men are not mortal. All men are mortal.

 No boys are rude. Some boys are not rude.

 All cars are fast. Some cars are not fast.

 Some men are mortal. Some cars are fast.

 No men are mortal. Some men are mortal.

 Some boys are not rude. Some boys are rude.

1. What is the First Law of Opposition?
2. Can both A and O statements be true at the same time?
3. Can both A and O statements be false at the same time?
4. Can both E and I statements be true at the same time?
5. Can both E and I statements be false at the same time?
6. Explain why the A statement, “All S is P,” and the E statement, “No S is P” are not contradictory.
7. Express the Rule of Contraries.
8. Tell the quality and quantity of the A statement.
9. Tell the quality and quantity of the E statement.
10. Is the A statement contrary to the E statement? If so, explain why; if not, explain why not.
11. Mark a **X** in front of each pair of contraries.

 All men are mortal No men are mortal

 No logic problems are difficult. All logic problems are difficult.

 Some logic problems are difficult. No logic problems are difficult.

 All logic problems are difficult. Some logic problems are not difficult.

 All swans are white. No swans are white.

1. What is the Second Law of Opposition?
2. Which pair of statements comply with the Second Law of Opposition?

**Subcontraries and Subalterns**

1. Express the Rule of Subcontraries.
2. Tell the quality and quantity of the I statement.
3. Tell the quality and quantity of the O statement.
4. Is the I statement subcontrary to the O statement? If so, explain why; if not, explain.
5. Write the subcontrary statements that match the one given.

 Some logic problems are difficult.

 Some dogs are not friendly.

1. What is the Third Law of Opposition?
2. Can the I and O statements be true at the same time?
3. Can the I and O statements be false at the same time?
4. Express the Rule of Subalterns.
5. Is the A statement subalternate to the O statement? If so, explain why; if not, explain why not.
6. How many subalternate pairs are there?
7. Mark an **X** by the subalternate pairs.

 All logic problems are difficult. Some logic problems are difficult.

 No logic problems are difficult. Some logic problems are not difficult.

 Some chickens bite. All chickens bite.

 All chickens bite. No chickens bite.

1. What is the Fourth Law of Opposition?
2. Make up one pair of contrary statements that are not in the reading/questions.
3. Make up one pair of subaltern statements that are not in the reading/questions.