

## 1. Goals



Source: <http://heythrop.su/logic-society/>

By the end of this week, you should be able to:

- Understand the terminologies associated with the study of Propositional Logic and Truth Tables
- Use notations to represent arguments of various forms (injunction, conjunction, inverse, converse, negation, contrapositive, implication, bi-conditional)
- Determine the truth value of a statement using truth tables
- Use inductive and deductive reasoning to solve logic puzzles.

## 2. Theoretical Components

1. Read through Chapter 9 (9A & 9B). Go through all the terminologies and examples. Make a list of all new terms you come across. Chapter 9 is on google classroom.

2. Watch this only after you have studied examples from Chapter 9:

[http://www.youtube.com/watch?v=Wnc3\\_AekOno](http://www.youtube.com/watch?v=Wnc3_AekOno)

3. Basic Concepts of Propositional Logic:

<http://www.youtube.com/watch?v=qV4htTfow-E>

4. Modus Tollens & Modus Ponens:

<https://www.youtube.com/watch?v=NTSZMdGlo4g>

5. Read through this site on what is a Logic Puzzle, how to solve such puzzles and attempt to solve at least 2 puzzles. Keep a record of the puzzles you have solved in your portfolio.

<http://www.logic-puzzles.org/>

You may find more puzzles here:

<http://www.puzzlersparadise.com/page1034.html>

## 3. Practical Components

Complete Exercises 9A and 9B from Chapter 9.

EX9A: 1,3,7,9,10,12,13,14,15.

EX9B: 4,5,7,11,12,13,14,15,16,17.

## 4. Investigation

A: Investigate DeMorgan's Law of negating AND and OR. Use De Morgan's laws to determine whether the two statements are equivalent:

$\sim p \vee \sim q$ ,  $\sim(p \wedge q)$ .



20 marks (see the rubric)

## 5. QFO

Quiz/Forum/Other

Do these quizzes:

<http://goo.gl/3X7JJb>

<http://goo.gl/jpaVIN>

You may make notes while doing these quizzes.