

NEW HORIZONS
 DOCENTE:
 SANTIAGO A. PEREZ
 COORDINADORA:
 EMMA ENCARNACION
 DIRECTORA :
 ANA MARIA MARTIJENA



algebra 2

VOLUME 1, ISSUE 1

AUGUST - OCTOBER

GENERAL OBJECTIVES

- Review of real numbers operations and properties.
- introduce students to logic and set theory language.
- Apply the logic and set theory language in real life problems.
- Analyze the relationships between variables in functions

INSIDE THIS ISSUE:

Activities 2

Project (s) 2

Practice 2

Grades distribution:

Class work 30

Homework 5

Test and quizzes 50

Projects 15

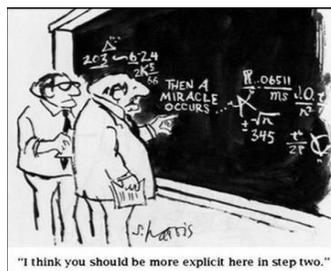
Introduction to: Logic and set theory language

"Every human being has rights. John is a human being, therefore, John has rights." Is this an inductive or deductive form of reasoning?.

These are the types of exercises that we will be dealing with during our course on logic.

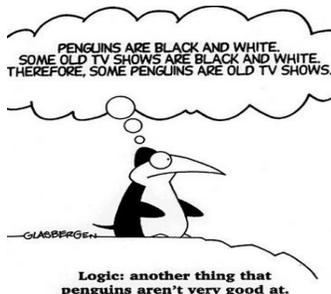
Why should I learn logic and set theory language?.

"This is essential in General Problem Solving: It helps us to analyze concepts, definitions, arguments and problems, and contributes to our capacity to organize ideas and issues to deal with questions of value. Communication Skills: Here our skills will be enhanced as we are able to present ideas through well-constructed systematic and reasoned arguments. We will learn to build and defend our own



"I think you should be more explicit here in step two."

views, to appreciate competing positions, and to indicate forcefully why we consider our own views preferable to alternatives. "



Relationships between variables and algebraic functions

Student will be introduced to the concepts of relations and algebraic function.

We will discuss what are functions, and how we use them in items such as cell phones, PCs, appliances, etc.

Learning about functions is the primary, elemental step to learning about anything in math that follows.

Vocabulary

Absolute value

Additive inverse

Integers

Natural numbers

Real numbers

Variables

Constant

Substitute

Value, Evaluating

Equivalent expressions

Commutative, Associative and Identity Properties

Additive identity

Multiplicative Identity

The Distributive Property

Factoring

Factor

Coefficient

Like terms

Standard form

Exponential Notation

Vocabulary

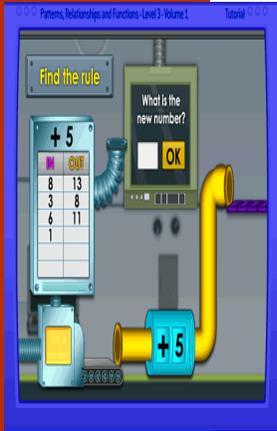
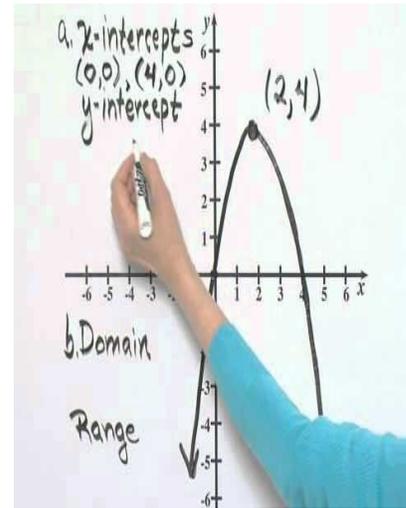


Illustration of a function

- Base, Exponent, Power
- Inductive Reasoning
- Deductive Reasoning
- Column proofs
- Logical operator
- Unary and Binary operators
- Negation, Conjunction
- Disjunction, Symbolic form
- Conditional, Biconditional
- Exclusive (or)
- Truth Value
- Truth Table

- Quantifiers
- Set
- Cardinal number
- Elements
- Subset, Superset
- Disjoint Sets
- Venn Diagram
- Finite Set
- Infinite Set
- Empty / Null



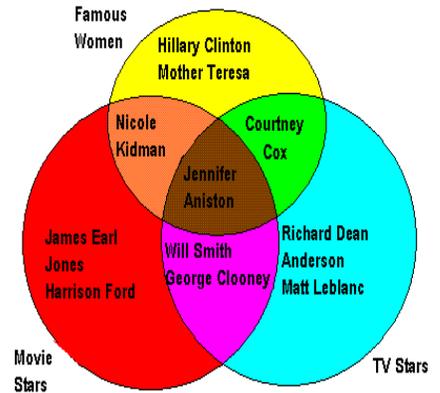
The essence of mathematics is not to make simple things complicated, but to make complicated things simple

Activities

Students will be involved in a series of different activities both in the classroom and at home. Here we mention some of them:

- Solve a Sherlock Homes Mystery case
- Solve riddles
- Trial and error combined with analytical reasoning exercises

- Create their own original riddle
- Complete exercises from their text book.



Practice & Projects

Integration of Physical and living environment, and humans'



Student will be given a cumulative practice to work on during the whole first period. Every week we will work on a section

of this practice.

Special Projects:

- Create a mechanism illustrating a function.
- Write an original problem that could be solved using Venn diagram
- Create a display explaining how our daily activities affects the environment. They will illustrate it with Venn diagrams