

1.1 cont.

Aug 30, 2006

ex1) What is the ^{truth value} T.V. of ...

$$x + 3 = 12$$

Variables or

He was the fifteenth
President of the U.S.A.

We do Not know

Because we do

Not know the

Value of the

Placeholder

if $x = 9$ then $x + 3 = 12$ is True.

if $x = 10$ then $x + 3 = 12$ is False.

- Open sentence: contains one
or more Placeholder. T or F?

What is a Variable? Things that change

It is a Symbol to Rep. Something else!

What can replace a Variable,
a Number, statement,
a Domain of Numbers

Box of Domains.

set of Natural #'s $\Rightarrow \mathbb{N}$
 $\hookrightarrow \{1, 2, 3, 4, \dots\}$

set of Whole #'s $\Rightarrow \mathbb{W}$
 $\hookrightarrow \{0, 1, 2, 3, \dots\}$

set of Integer #'s $\Rightarrow \mathbb{Z}$
 $\hookrightarrow \{\dots, -2, -1, 0, 1, 2, \dots\}$

set of Real #'s $\Rightarrow \mathbb{R}$
 $\hookrightarrow \{\dots, -2, \dots, -1, \dots, 0, \dots, 1, \dots, 2, \dots\}$

Set of Rational #'s
 $\left\{ \frac{\{\dots, -2, -1, 0, 1, 2, \dots\}}{\{\dots, -2, -1, 0, 1, 2, \dots\}} \right\} \Rightarrow \mathbb{Q}$

O.T.L.

