Simple Statements and Negation

1 Simple Statements

A very important part of this chapter is the understanding what a Simple Statements is. Simple statements contain one positive idea, the word "not" cannot appear in it or any other type of negation.

So a simple statement could be:

I went on vacation in Russia.

Or

Samantha has a cold.

Or

The Nile is the longest river in the world

But NOT:

The Nile is NOT the longest river in the world. This is considered a negation of a simple statement.

2 Negation

Negations are something that we can do to a simple statement: For instance the simple statement

Samantha has a cold. can be negated to be

Samantha does not have a cold.

For these statements we want to try to make them English Class worthy. Correct English in a Math class is usually not a major concern, but here it has to be, things just have to make sense!

Negation of simple Global Statements are not super important, but they can get interesting:

<table>
<thead>
<tr>
<th>Simple Global Statement</th>
<th>Negation of Global Statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>All birds can fly.</td>
<td>Some birds cannot fly.</td>
</tr>
<tr>
<td>No fish can walk on land.</td>
<td>Some fish do walk on land.</td>
</tr>
<tr>
<td>Some people are nice.</td>
<td>There are no nice people.</td>
</tr>
<tr>
<td>Some people do not swim.</td>
<td>All people swim.</td>
</tr>
</tbody>
</table>

We are going to start dealing with statements that seem to make no sense. What we have to remember in this chapter is that we are not concerned with whether things are true or false or if they make any sense at all. This is kind of like the story of Alice in Wonderland. That might be because the author was a Logician and was fooling around with this Logic stuff and came up with a crazy tale!

To read up on this: Charles Lutwidge Dodgson aka Lewis Carroll

http://www-groups.dcs.st-and.ac.uk/~history/Mathematicians/Dodgson.html

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