

The Island of Perfect Logicians -- Extra Credit

(Due Thursday, January 21)

There once was an island where all the inhabitants were *Perfect Logicians* and also *Perfectly Law Abiding*. The islanders had the following three laws:

1. Anyone who finds out that they have blue eyes must commit suicide that same day before sundown by jumping off a cliff.
2. No one is allowed to tell another person that the other person has blue eyes.
3. No mirrors are allowed on the island.

One day a man from the *Island of Perfect Truth Tellers* visits the *Island of Perfect Logicians*. After the dinner that night the visitor from the *Island of Perfect Truth Tellers* says to all the inhabitants of the *Island of Perfect Logicians* that he is happy to have dinner on an island where at least one person has blue eyes. (All the residents of the *Island of Perfect Truth Tellers* have brown eyes.)

There are 100 inhabitants on the *Island of Perfect Logician*, and all 100 inhabitants have blue eyes. One hundred days after the visit of the person from the *Island of Perfect Truth Tellers* all the inhabitants of the *Island of Perfect Logicians* jump off a cliff. Why?