The head of the department told two professors (Alice and Bob) that one of them is one year older than the other but certainly both of them were born after 1949. Then one has heard the following dialogue:

A: I do not know what year you were born.
B: I do not know what year you were born either.
A: I do not know what year you were born either.
B: I do not know what year you were born either.
A: I do not know what year you were born either.
B: I do not know what year you were born either.
A: Now I know what year you were born.
B: Then I also know what year you were born.

How old are Alice and Bob? (You may assume that Alice and Bob know their own birthdays.)

All the information about the Problem of the Week challenge can be found at http://ProbOfTheWeekUTD.wordpress.com