The Maya of Central America had a very complex number system which is a modified base-20 system. It evolved out of their astronomical observations of Venus and their calendrics. The interesting consequence of this modified system is that it loses uniqueness. In this talk we will give a short overview of the Mayan number system and explain in what cases it does not express numbers uniquely. This material is interesting from a mathematical point of view and can also be used in a number of math and math history courses. (Received September 07, 2011)