Exploring Numeration Systems Activity

In this activity, you will be exploring the numeration or counting systems of different cultures, and comparing them to our Base-10 system.

(1) First you will role-play as a Babylonian, Roman, or Egyptian trader. You will be asked to trade varying quantities of goats with other traders using your culture's unique numeration system. You will be given a sheet explaining your culture's method of counting and the trades you wish to make, some chocolate gold coins, and a diagram of goats to help you communicate. Remember, you do not know Base-10 number words like "seven" or "fifty-four," nor do you know numerals like "5" or "67."

(2) Second, you will partner up with two traders from *different* cultures than your own. Using a big piece of paper and markers, you will compare and contrast characteristics of the Roman, Babylonian, and Egyptian systems with (1) each other, and (2) our Base-10 counting system. Consider:

- The symbols used
- The positional meaning of symbols (i.e., place value)
- How easy it is to represent different types of numbers
- Possible confusions or ambiguities when using the system
- How operations like addition and multiplication might work in each system.

Be prepared to make an argument to the class about which system or systems represent the most effective and useful way to count in the context of real world activities.