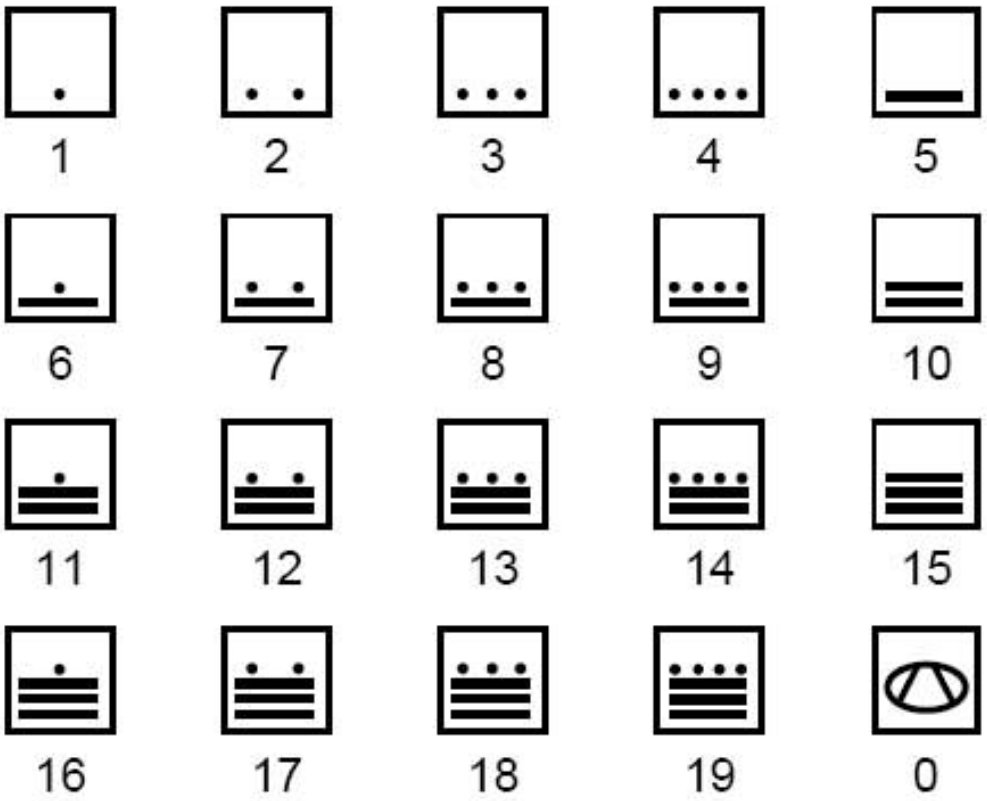
Mayan Math System – Vigesimal, Base 20 System



On the chart you see above. Each dot represents the number 1, each line represents the number 5. The shell represents a zero. Our math system is a Decimal or Base 10 system. We use place values based off of 10's and begin our place values horizontally with the lowest from right to left. The Mayans used a Vigesimal or Base 20 system. They arranged their place values vertically with the lowest from the bottom to the top.

EXAMPLE
Our system…
1000's place (10) – 100's place (10) – 10's place (10) – 1's place (1)
Mayan system…
8000's place (20), in this placement a dot = 8000 and a line = 40,000
400's place (20), in this placement a dot = 400 and a line = 2000
20's place (20), in this placement a dot = 20 and a line = 100
1's place (1), in this placement a dot = 1 and a line = 5

EXAMPLE OF TRANSLATION (It helps to use expanded notation.)
Our system…
9,999
9x1000 + 9x100 + 9x10 + 9 = 9,999 **OR** 9000 + 900 + 90 + 9 = 9,999
Mayan system…
9x8000 + 9x400 + 9x20 + 9 = 75,789 **OR** 72,000 + 3600 + 180 + 9 = 75,789
So the Mayan equivalent to our number 9,999 is 75,789.