

## The Babylonian Number System

The ancient Babylonians lived in what is now Iraq. They had a number system using the base 60, compared to the now universally used base 10. The Babylonians constructed their system using only two symbols, a symbol representing 1 and a symbol representing 10 (we use ten symbols - 0, 1, 2, 3, 4, 5, 6, 7, 8, 9). The numbers 1 to 59 as constructed as in the diagram.

1		11		21		31		41		51	
2		12		22		32		42		52	
3		13		23		33		43		53	
4		14		24		34		44		54	
5		15		25		35		45		55	
6		16		26		36		46		56	
7		17		27		37		47		57	
8		18		28		38		48		58	
9		19		29		39		49		59	
10		20		30		40		50			

The Babylonian system built on the earlier Arkadian and Sumerian systems by introducing place values. This made the writing of large numbers easier and more compact.

Consider the number written in Babylonian symbols as



We translate this into decimal as

$$1 \times 60^3 + 57 \times 60^2 + 46 \times 60 + 40 = 424000$$

We have inherited from the Babylonians the division of the circle into 360 degrees, the degree into 60 minutes, the minute into 60 seconds etc, and the hour into 60 minutes and the minute into 60 seconds.