Assignment 1

Numbers

The Egyptians invented the first ciphered numeral system, and the Greeks followed by mapping their counting numbers onto Ionian and Doric alphabets. Roman numerals, a system that used combinations of letters from the Roman alphabet, remained dominant in Europe until the spread of the superior Hindu–Arabic numeral system which was invented by ancient Indians around the late 14th century, and the Hindu–Arabic numeral system remains the most common system for representing numbers in the world today.

In China, In the Xia, Shang, and Zhou dynasties, a mature numeration system appeared in oracle bone inscriptions and bronze inscriptions. Oracle inscriptions are the product of the Shang Dynasty. They are carved on tortoise shells and animal bones. At that time they were the main means for witchcraft and historians to divine and record things for the Shang royal family.

Probabilities

The modern mathematical theory of probability has its roots in attempts to analyze games of chance by Gerolamo Cardano in the sixteenth century and by Pierre de Fermat and Blaise Pascal in the seventeenth century (for example the "problem of points"). Christiaan Huygens published a book on the subject in 1657. In the 19th century, what is considered the classical definition of probability was completed by Pierre Laplace.

In China during the reign of Guangxu in the Qing Dynasty, John Fryer (839~7), an England missionary, and Hua Hengfang, a Chinese mathematician, compiled *Maths of Doubt* according to the works of Thomas Galloway (1796-1851), Anderson, R.E., and others. This book brings probability theory into China.

Statistics

The birth of statistics is often dated to 1662, when John Graunt, along with William Petty, developed early human statistical and census methods that provided a framework for modern demography. He produced the first life table, giving probabilities of survival to each age.

In the primitive society of China, simple statistical grouping (major events, minor events) and simple aggregate indicators (number of major events, number of minor events) were carried out through "tying ropes to record events", thus forming the seeds of Chinese statistics.