The ages attributed to the early human ancestors in Genesis are quite unlike those we are accustomed to in our modern world. The oldest of them, Methuselah, is reported to have lived 969 years (Gen. 5:27), Noah, 950 years (Gen. 9:29) and Adam, 930 years (Gen. 5:5). These extremely long life spans were explained in many ways. Josephus writes that it may have been a function of their diet, or that God allowed them to live so long because they were close to the initial creation of man and were "beloved by God." Nachmanides explains that since early man was more perfect biologically, people lived much longer. This changed because of climatic changes that resulted from the Flood.

Modern archeological discoveries provide a new way of approaching these long life spans. The significance of these long years can be seen from the information which was found in an ancient Sumerian document. A Cuneiform prism (ca. 1740 BCE) contains a list of the Antediluvian Kings whose ages are even far greater than those of the Patriarchs of Genesis.

The Cuneiform document enumerates the names of eight kings who reigned before the flood according to Sumerian saga, and their ages happen to be multiples of 3600 (a saroi, in Sumerian), except for the last two (unless we add them together). Altogether, the kings mentioned in this document would have reigned for 67 saroi or 241,200 years. This sexagesimal system of multiples of 3600 (60 x 60) remained in place until the 16th century BCE. King Eridu, the first of these patriarchs, lived 28,800 years or 8 saroi and Bad Tibira some 43,200 years or 12 saroi.

We must bear in mind that these Sumerian kings were regarded not merely as human beings but as gods or demigods (kings from heaven). Their ages may have been computed according to an astronomical system which still eludes us. The eight patriarchs listed in Genesis chapter 5, on the other hand, were human beings who lived before the Flood and their ages are under a thousand years. In the Sumerian document, the kings' ages dropped after the "flood" to ages appropriate to the ages of the Hebrew patriarchs before the
Flood, i.e., none of the kings after the flood reigned more than 960 years.⁵ We see that the ages in this Sumerian document reflect multiples of a significant number.

A recent discovery by Professor Brian Abrahamson⁶ of the University of Adelaide, Australia, sheds new light on the question of the Hebrew patriarchs' longevity. After he proceeded with a factorial analysis of these numbers, he found that several of them seemed to be part of a series and were multiples of 19. Indeed, Methuselah lived 969 years, which corresponds to 51 times 19. Noah lived 950 years or 50 times 19. Adam lived 930 years or 49 times 19 - minus 1 (possibly because he committed a major sin). His son Seth lived a total of 932 years, which is 48 times 19. This is indeed an amazing sequence of multiples of 19. The discovery of Abrahamson led him to believe that these numbers must have had a symbolic meaning in antiquity.

In the absence of any reference to the factor 19 in our Scriptures, we must turn once again to ancient history for a possible explanation. We find that the number 19 is connected to the "Metonic Cycle," a period of 19 solar years, corresponding almost exactly to 235 lunar cycles or 12 years of 12 lunar cycles and 7 years of 13 lunar cycles. Thus every 19 years, the solar and lunar calendars coincide. This discovery is usually attributed to the Greek astronomer Meton who lived in the 5th cent. BC, though "there is little doubt that the major astronomic facts were known long before him."⁷

According to Dr. Rachel Elior of the Hebrew University, this span of 19 years has probably been known to the Judeans since the 3rd cent. BCE when the calendar was adopted. The number 19 would thus be connected to the computing of the calendar.

In Genesis 11:10-17, the factor 6 comes to play a certain role. Indeed, Shem lived 600 years and Arpachshad lived 438 (6 x 73) years. Others work out as multiples of 6 with minor corrections. For example, Eber lived 464 years (6 x 77 + 2).⁸

From Genesis 11:18 to 32, the factor 7 plays a major role. The ages have now come down to a little over two hundred and are mainly multiples of seven, albeit not exactly. Some corrections seem to have been made for reasons that are not known to us. Peleg and Reu lived 239 years (7 x 34 + 1), Serug, 230 years (7 x 33 - 1), Nahor lived to 148 (7 x 21 + 1) and Terah lived 205 years (7 x 29 + 2).
As we reach the end of the chapter and come to the family of Abram (Abraham), the ages of the Patriarchs are all under 200. Abraham lived for 175 years \( (7 \times 25) \) and Jacob for 147 years \( (7 \times 21) \). Among the antediluvian patriarchs listed in Genesis 5, Lemech had lived 777 years, obviously to emphasize the importance of number 7. Isaac, on the other hand, lived 180 years, that is three times 60, in keeping with the age patterns of the patriarchs mentioned in Genesis 11:10-17, based on multiples of 6.

The number seven had a special cosmic significance in antiquity because it was the number of the stars which were believed to control all events on earth. Indeed, each of these seven celestial bodies was eventually associated to a day of the week. Sunday is the day of the Sun, Monday, the day of the Moon, Tuesday the day of Tiu (Mars), Wednesday, the day of Woden or Odin (Mercury), Thursday, the day of Thor (Jupiter), Friday, the day of Venus and Saturday, the day of Saturn. The seven days of the week became the cornerstone of the calendar.

In Genesis 6:3, it is stated that 120 should now be the maximum age of human beings: *their days shall be one hundred twenty years*. But not until Moses did this rule become a reality. Moses lived 120 years \( (3 \times 40) \) since there were three periods in the life of Moses. We know about the last period, the forty years of wandering on the wilderness. The mathematician may be interested to know that 120 is also the integral of 1 to 5 \( (1 \times 2 \times 3 \times 4 \times 5) \).

Prof. Umberto Cassuto noted that many of the ages of the Patriarchs were either exact multiples of 5 or else multiples of five with the addition of seven (one number, the years of Mathuselah's life, was twice augmented by seven, one septennium having been added to his age when his eldest son was born, and another to the remaining years of his life).\(^9\) However, the series of 51, 50, 49, and 48 times 19 is so amazing that it could hardly have been a coincidence. Mathematicians may be able to tell us how often such a series is likely to happen by chance.

As for Joseph and Joshua, they both lived 110 years because they were both born in Egypt where the age of 110 years was regarded the ideal lifespan for mature and noble individuals, as we find in several ancient Egyptian documents:

> So I shall bring it about that your body shall be healthful, that the Pharaoh shall be satisfied with you in all circumstances and that
you shall obtain years of life without default. It has caused me on earth to obtain one hundred and ten years of life, along with the gift of the favor of the Pharaoh among the first of those whom their works have ennobled, satisfying the Pharaoh in a place of dignity. (from the Precepts of Petah-Hotep) 

In another document, we find a similar interpretation of the number one hundred and ten:

King Khufu said: "And who is he, my son?" "His name is Dedi," answered Prince Hordadef. "He is a very old man, for his years are a hundred and ten. Each day he eats a joint of beef and five hundred loaves of bread, and drinks a hundred jugs of beer. He can smite off the head of a living creature and restore it again; he can make a lion follow him; and he knows the secrets of the habitation of the god Thoth, which Your Majesty has desired to know so that you may design the chambers of your pyramid." 

We have thus tried to show that the conventional ages of the patriarchs may have had a symbolic meaning in biblical days, even though we have not yet been able to decipher the system which was used. It may in all likelihood have been implemented to assess their wisdom, virtue or spiritual proximity to God.

NOTES
1. Antiquities 1:3:9. The idea that diet helped the ancients live for many years is also found in Abravanel in his commentary to Genesis 5.
5. It has been suggested that the Psalm 90:4, For in Your sight a thousand years are as yesterday when it is passed, like a watch of the night, may imply that a thousand years or more belong to God.
7. The Torah, A Modern Commentary, p. 42.
8. It is interesting to note that our division of the hour into 60 minutes and the circle in 360 degrees is derived from the ancient Sumerian system.


WE WELCOME ARTICLES ON THE FOLLOWING BOOKS OF TANAKH:

**KINGS**
**ISAIAH**
**JEREMIAH**
**MICAH**
**AMOS**
**JOEL**
**HAGGAI**
**HABAKKUK**
**PSALMS**
**PROVERBS**
**CHRONICLES**