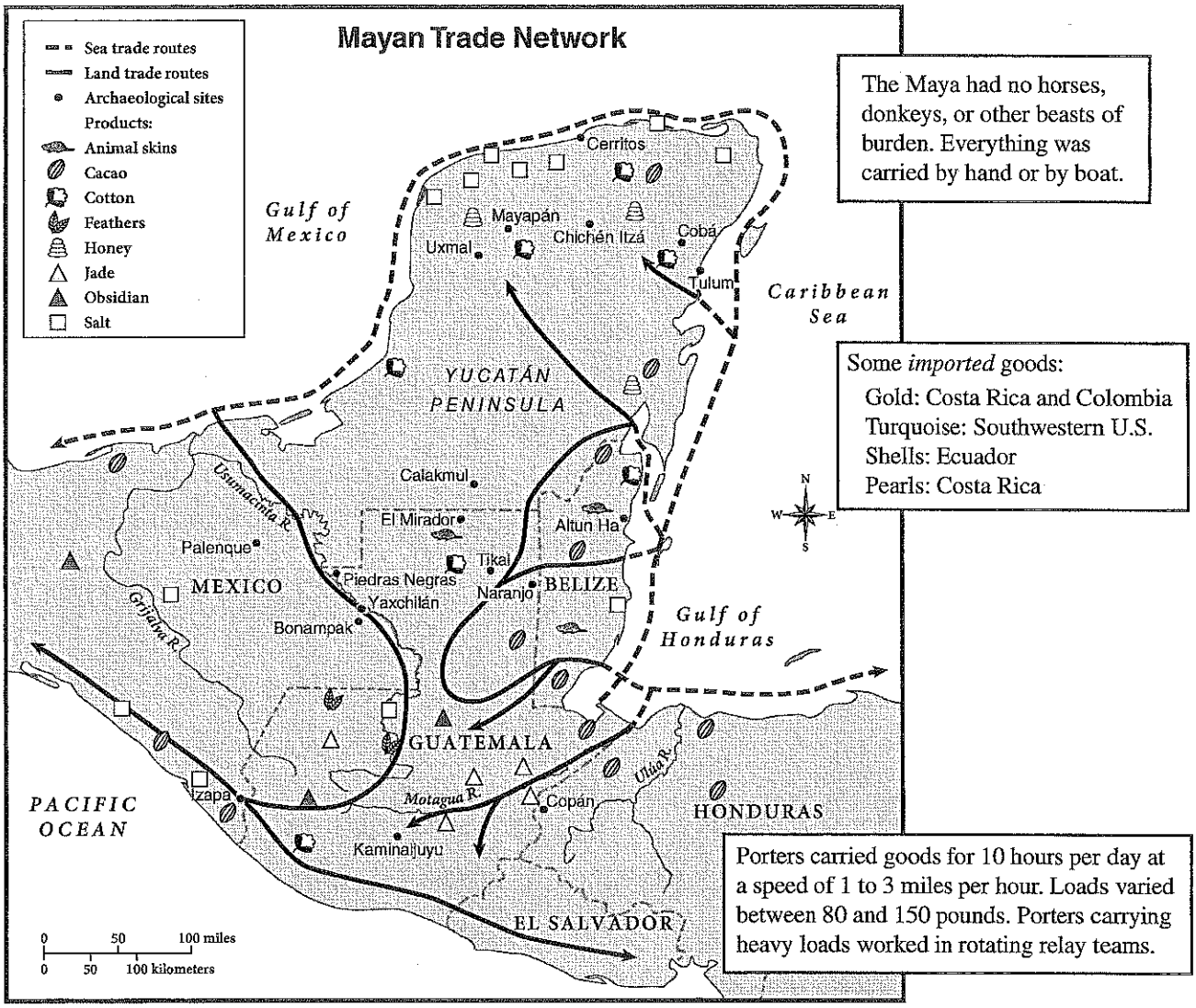
Document A

Source: Map created from various sources.



The Maya had no horses, donkeys, or other beasts of burden. Everything was carried by hand or by boat.

Some *imported* goods:
Gold: Costa Rica and Colombia
Turquoise: Southwestern U.S.
Shells: Ecuador
Pearls: Costa Rica

Porters carried goods for 10 hours per day at a speed of 1 to 3 miles per hour. Loads varied between 80 and 150 pounds. Porters carrying heavy loads worked in rotating relay teams.

Document Analysis

1. Where did most of the salt come from? What reason explains that?

2. We know that the Maya widely cultivated maize, or corn. Why do you suppose it is not listed as a trade item on this map?

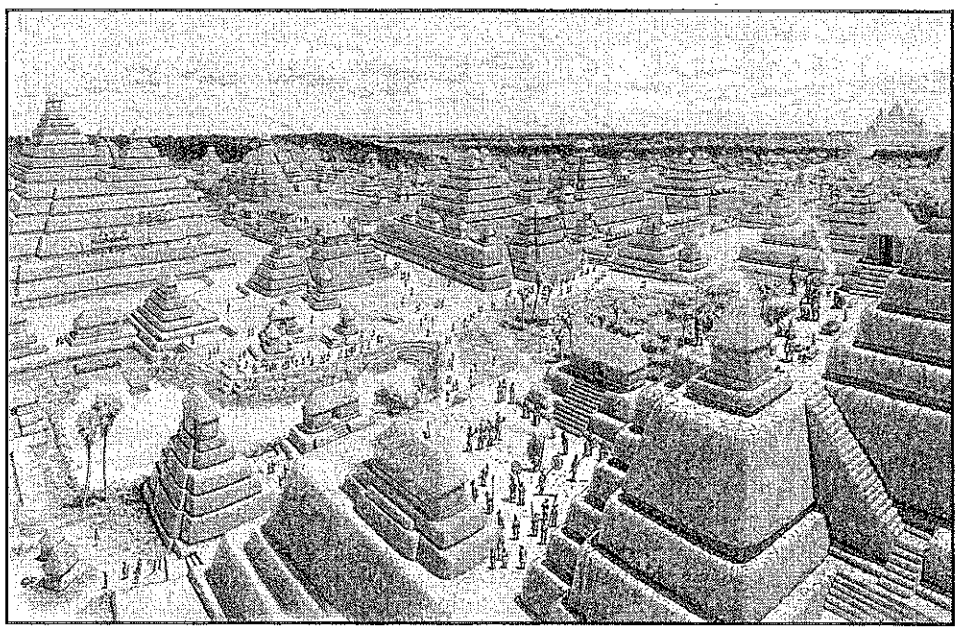
3. If the people of Cerritos traded with the people of Mayapán, what goods might they exchange? How about the people of Copán and the people of El Mirador?

4. How would the trade shown on this map improve life for people across the Mayan region?

5. Using at least two measuring sticks – scale, genius, physical effort and significance – describe what is remarkable about the Mayan trade network.

Document B

Source: Lynn V. Foster, *Handbook to Life in the Ancient Maya World*, Facts on File, Inc., New York, NY, 2002.



The Mayan City of El Mirador

Archaeologists have argued that civilization requires urban centers and that the measure of a civilization can be made by the architecture of its cities.... Based on its architectural remains, Maya civilization ranks as one of the great pre-industrial cultures of the world.

... By 1975, archaeologists had catalogued more than 2,500 Maya locations of varying size and date with some stone construction. Numerous cities with populations in the tens of thousands have left a monumental record in the preconquest* era.

... Masonry architecture required central organization, craft specialization, and political power to command a large workforce.... The Maya were able to organize the labor ... of masons, plasterers, and supervising architects to build and maintain their cities of immense stone pyramids, stone palaces, and temples, ball courts, and other ritual buildings. For the single home of a Copán** nobleman, it has been estimated that at least 80 to 130 workers would have been employed fulltime to finish it in two to three months. The densest urban core of a city such as Tikal*** covered six square kilometers (more than two square miles), so the number of workers involved in construction and reconstruction must have been immense.

*Before the Spanish arrived (around 1524 CE)
**Mayan city of about 25,000 in Honduras
***One of largest Mayan cities, with population of 70,000

Document Analysis

1. What is a pre-industrial culture?

2. What was the estimated population of ancient Copán? Of ancient Tikal?

3. What does the ability to build great buildings out of stone tell you about Mayan political power? Explain.

4. Which criterion of "remarkableness" is best demonstrated by the drawing of El Mirador? Explain.

5. Using at least two of our working criteria – scale, genius, effort, and significance – what was remarkable about Mayan architecture?

Document C

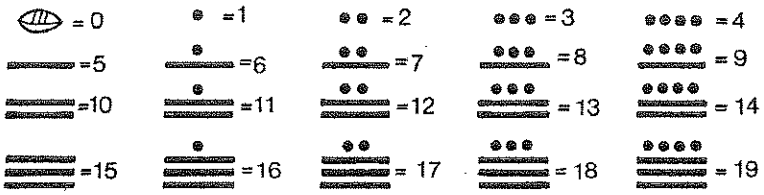
Source: Ralph Whitlock, *Everyday Life of the Maya*, Hippocrene Books, 1987.

Note: We write numbers using a system in which the value of each digit depends on its position within the number. The digit furthest to the right stands for ones, the next digit to the left stands for tens, and so on. This type of system cannot work without a symbol for zero to show when a position is empty. The Maya used a positional system based on the number 20, rather than the number 10, and they were one of the first cultures in the world to develop the idea of the zero.

THE MAYAN NUMBER SYSTEM

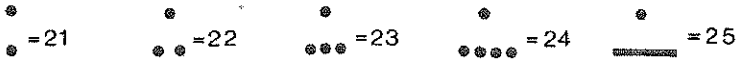
The Maya used only three signs: the dot, ● (1), the bar, ▬ (5), and the shell, 🐚 (0).

The first nineteen numerals were written as follows:

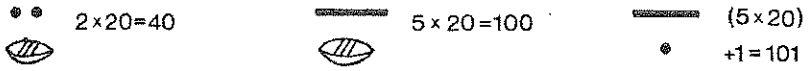


Just as with our decimal system (based on 10) we move one column to the left when we reach 10, so with the Mayan vigesimal system (based on 20) they moved one rung upwards when they reached 20.

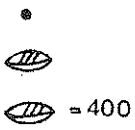
The numbers 21 to 25 were written as follows:



Some examples:



In our decimal system, we move a further column to the left when we reach 10 x 10 = 100. In the same way the Maya moved a further rung upwards (to make three rungs) when they reached 20 x 20 = 400.



Some examples:

Document Analysis

1. On what number was the Mayan number system based?

2. What symbol did the Maya use for zero? What symbols did they use for one and for five?

3. How did the Maya write: a. zero b. 7 c. 26 d. 60 e. 401?

4. Why is it important to have a symbol for zero?

5. Using at least two measuring sticks – scale, genius, effort and significance – describe what was remarkable about the Mayan system of mathematics.

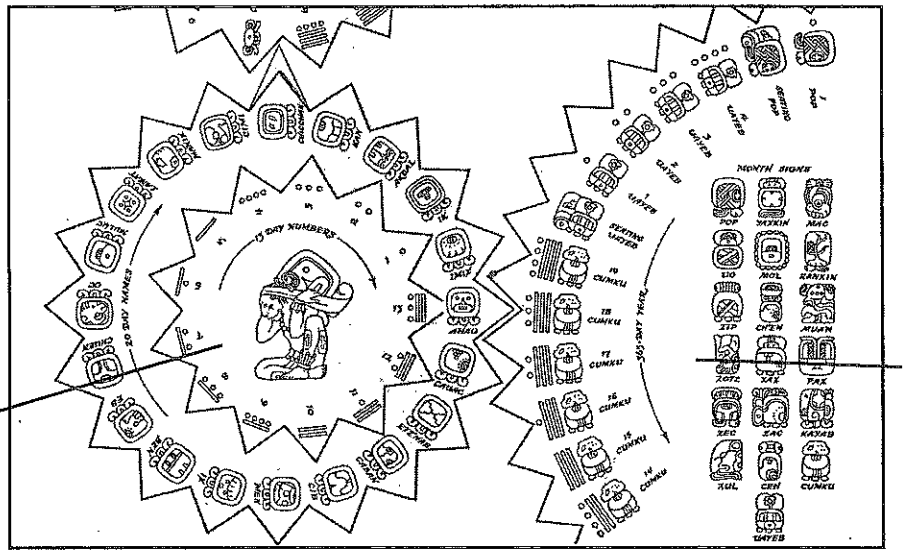
Document D

Source: Barbara L. Beck, *The Ancient Maya*, Franklin Watts, 1983.

The Maya had two main calendars. One was the sacred or ritual calendar, called tzolkin. It was a cycle of 260 days, and it marked the ceremonial life of the people. They also had a civil calendar, based on the solar year. This calendar had eighteen months of twenty days each, adding up to 360 days in all. To this were added five unlucky days, called Uayeb, to make a total of 365 days as in our calendar. This solar calendar was called haab.... The two calendar cycles were used together. They were like two cogged wheels, revolving alongside each other, with the cogs (days) meshing as the wheels turned.

... The Maya ... developed the calendar further than any other New World people, and their calendar was more accurate than any other of their time. They were masters of the science of time measurement .... Observatories were built, at Chichén Itzá and other cities, to use in studying the movements of the sun and the moon, planets such as Venus and Mars, and the stars. The Maya priest-astronomers collected information over many years in order to make their predictions and develop their systems. So great was their knowledge that they could predict eclipses of the moon....

Source:
Eric S. Thompson, *The Rise and Fall of Maya Civilization*, University of Oklahoma Press, 1973.



Note: In addition to their ritual and solar calendars, the Maya kept a long count cycle that began in 3114 BCE and was scheduled to end 5,200 years later on December 21, 2012.

Document Analysis

1. What were the names of the three Mayan calendars? (Hint: See note also.)

2. What probably explains why the Maya used 20-day segments in their ritual calendar and 20-day months in their solar calendar?

3. Which calendar was used to keep track of religious days? Explain.

4. Which calendar would have been most useful in predicting the beginning of rainy seasons? Why?

5. Using at least one measuring stick – scale, genius, effort, or significance – describe what was remarkable about the Maya's development of their calendar.