

# Achievements in Astronomy & Architecture in the Early Civilizations of America

1. The Mayan civilization designed and constructed massive stone \_\_\_\_\_ and temples, all without the aid of \_\_\_\_\_ tools.
  - a) Mosques, wooden
  - b) Pyramids, metal
  - c) Figures, plastic
2. The Maya made huge astronomical and mathematical advancements with the concept of \_\_\_\_\_.
  - a) Numbers
  - b) Addition
  - c) Zero
3. The use of zero allowed Mayan mathematicians to perform large and complex \_\_\_\_\_.
  - a) Equations
  - b) Solutions
  - c) Products
4. Instead of 10 digits, they used a base number of \_\_\_\_\_.
  - a) 30
  - b) 15
  - c) 20
5. \_\_\_\_\_ and \_\_\_\_\_ were used as shorthand for counting.
  - a) Bars, dots
  - b) Circles, squares
  - c) Diamonds, hearts
6. A dot represented the number \_\_\_\_\_, a bar represented the number \_\_\_\_\_. A \_\_\_\_\_ was used to represent zero.
  - a) 5, 8, clover
  - b) 1, 5, seashell
  - c) 3, 4, circle
7. The Maya used their mathematical system to make highly detailed astronomical observations, such as the movement of the \_\_\_\_\_, annual winter and summer \_\_\_\_\_, and fall and spring \_\_\_\_\_.
  - a) Sun, solstices, equinox
  - b) Moon, coordinates, equator
  - c) Planets, seasons, time zones
8. The Maya also learned how to predict \_\_\_\_\_. They kept a close watch of the position of the \_\_\_\_\_.
  - a) New moons, sun
  - b) Solar eclipses, moon
  - c) Changes in tides, planets
9. One of the Mayan's biggest achievements was the development of the \_\_\_\_\_ day calendar.
  - a) 200
  - b) 150
  - c) 365
10. The Mayas built towering pyramids, expansive palaces, and temples, all without the benefit of \_\_\_\_\_.
  - a) Currency
  - b) Gold
  - c) Modern machinery
11. They Mayas built observatories as maps, aligning their structures with the \_\_\_\_\_ and planets.
  - a) Sun
  - b) Stars
  - c) Moon
12. The Mayas charted the movements of the \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_. They were so precise that they predicted solar and lunar \_\_\_\_\_ centuries in advance.
  - a) Sun, moon, planets, eclipses
  - b) Stars, moon, meteorites, phases
  - c) Oceans, tides, time zones, days
13. The Maya's astronomical knowledge also played a vital role in their \_\_\_\_\_ as they relied on the stars to guide their \_\_\_\_\_ and \_\_\_\_\_ cycles.
  - a) Trade, selling and buying
  - b) Agriculture, planting, harvesting
  - c) Sleep cycles, bedtimes, wake times
14. The Mayas Numeral System was based on the Number \_\_\_\_\_, which is unlike any modern decimal system which is based on the Number 10.
  - a) 60
  - b) 20
  - c) 19
15. Three Symbols of the Mayan Calendar:

Shell – _____	Dot – _____	Bar – _____
a) five	a) two	a) one
b) three	b) one	b) three
c) zero	c) ten	c) five
16. The Mayan civilization was the first in the world to understand and use the concept of \_\_\_\_\_.
  - a) Zero
  - b) Numbers
  - c) Addition
17. Their Vagecimal system allowed them to record \_\_\_\_\_.
  - a) Multiple quantities
  - b) Small amounts
  - c) Large numbers