5 Base-20 Systems

[Asynchronous Lesson 0.3: corresponding video] Finally, we've built up to understanding the basic Mayan numerical patterns. Answer the following questions.

1. Suppose we introduce a base-20 number system. We need 20 digits, including 0-19. Use the Arabic numerals 0-9, plus letters from the alphabet A-K as digits representing the numbers 10-19. (a) What are the first three powers of 20: 20^0, 20^1, 20^2? (b) So how would you represent the decimal number 400 in your base-20 system? (c) How would you represent 401?

   A) 1, 20, 400
   B) KK
   C) KK+1

2. Convert the following numbers to your base-20 system:

   - 25 K+5
   - 45 FFF
   - 425 KK+K+5
   - 625 KK+Kx10+5

3. You've converted the following numbers to base-20:

   - 25
   - 45
   - 425
   - 625

   Now write these numbers as the Mayans wrote them, using the digits in Fig. 1. Subtract 20 from each of them, and write the results using Mayan digits. (You can put your work on a separate page).