Carbon Dating!!!

The Worcester Art Museum (WAM) has hired you all as Art Conservation Interns!!! They just got a shipment of many new pieces of art and they need your help to authenticate the works. They have already gathered all the C-14 carbon dating data for you. You just need to determine:

**What year it is from.**
**Whether the piece is really from the time period listed below. REAL OR FAKE!!!**

Carbon-14 Half Life = 5,730 years

**Example:** I found a DINOSAUR BONE in my backyard! The ratio of C14/C12 in the artifact is 1/8 of the C14/C12 ratio found in the same material today! What year is it from?

\[
\frac{1}{8} = \frac{1}{2} \times \frac{1}{2} \times \frac{1}{2} = 3 \text{ half lives!}
\]

\[2012 - 3(5730) = -13,207 = 13,207 \text{ BC! My bone is NOT a dinosaur bone because it is not old enough! D:}\]

1. **Venus of Brassempouy**
   Prehistoric (20,000 - 24,000 BC)
   C14/C12 = 1/16

2. **Sumerian Statuette**
   Sumerian (2,600 - 2,700 BC)
   C14/C12 = 1/2
3. **Neolithic Ceramics**  
Chinese Neolithic (6,000 - 10,000 BC)  
C14/C12 = 1/4

![Neolithic Ceramic](image)

4. **Pallet of Narmer**  
Egypt (3,000 - 3,100 BC)  
C14/C12 = 1/64

![Pallet of Narmer](image)

5. **Challenge!!** (Everyone should try this one but its ok if you don't get it right)

![Geometric Greek Funeral Vase](image)

**Geometric Greek Funeral Vase**  
Archaic Greek (700 - 900 BC)  
C14/C12 = 1/(1.414)  
[HINT: 1.414 = 2^(1/2)]