

# 综合推理冲刺

GMAT



## 第6课

# 多源推理题解题攻略

# 本节课授课要点

6.1

多源推理题解题攻略



## 6.1 多源推理题解题攻略

### 综合推理题

- [Techniques]
- Island Museum analyzes historical artifacts using one or more techniques described below—all but one of which is performed by an outside laboratory—to obtain specific information about an object's creation. For each type of material listed, the museum uses only the technique described:
- Animal teeth or bones: The museum performs isotope ratio mass spectrometry (IRMS) in-house to determine the ratios of chemical elements present, yielding clues as to the animal's diet and the minerals in its water supply.
- Metallic ores or alloys: Inductively coupled plasma mass spectrometry (ICP-MS) is used to determine the ratios of traces of metallic isotopes present, which differ according to where the sample was obtained.
- Plant matter: While they are living, plants absorb carbon-14, which decays at a predictable rate after death; thus radiocarbon dating is used to estimate a plant's date of death.
- Fired-clay objects: Thermoluminescence (TL) dating is used to provide an estimate of the time since clay was fired to create the object.



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- [Artifacts]
- Island Museum has acquired a collection of metal, fired clay, stone, bone, and wooden artifacts found on the Kaxna Islands, and presumed to be from the Kaxna Kingdom of 1250–850 BC. Researchers have mapped all the mines, quarries, and sources of clay on Kaxna and know that wooden artifacts of that time were generally created within 2 years after tree harvest. There is, however, considerable uncertainty as to whether these artifacts were actually created on Kaxna.
- In analyzing these artifacts, the museum assumes that radiocarbon dating is accurate to approximately  $\pm 200$  years and TL dating is accurate to approximately  $\pm 100$  years.

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- [Budget]
- For outside laboratory tests, the museum's first-year budget for the Kaxna collection allows unlimited IRMS testing, and a total of \$7,000—equal to the cost of 4 TL tests plus 15 radiocarbon tests, or the cost of 40 ICP-MS tests—for all other tests. For each technique applied by an outside lab, the museum is charged a fixed price per artifact.

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- 2-1. For each of the following artifacts in the museum's Kaxna collection, select Yes if, based on the museum's assumptions, a range of dates for the object's creation can be obtained using one of the techniques in the manner described. Otherwise, select No.

|   | YES | NO |                            |
|---|-----|----|----------------------------|
| A |     |    | Bronze statue of a deer    |
| B |     |    | Fired-clay pot             |
| C |     |    | Wooden statue of a warrior |



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- 2-2. For each of the following results of tests performed on Kaxna artifacts, select Yes if, based on the museum's assumptions, the result confirms that the artifact was created during the time of the Kaxna Kingdom. Otherwise, select NO.

|   | YES | NO |                                                                                                                   |
|---|-----|----|-------------------------------------------------------------------------------------------------------------------|
| A |     |    | Bone necklace shown by IRMS to have element ratios characteristic of artifacts known to be from the Kaxna Kingdom |
| B |     |    | Fired-clay jug dated to 1050 BC by TL dating                                                                      |
| C |     |    | Copper box shown by ICP-MS to have the same ratio of trace metals found in the copper mines of Kaxna              |



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- 2-3. For each of the following combination of Kaxna artifacts, select Yes if, based on the information provided, the cost of all pertinent techniques described can be shown to be within the museum's first-year Kaxna budget. Otherwise, select No.

|   | YES | NO |                                             |
|---|-----|----|---------------------------------------------|
| A |     |    | 2 fired-clay statues and 10 bronze statues. |
| B |     |    | 3 fired-clay statues and 5 tin implements.  |
| C |     |    | 4 fired-clay pots and 20 wooden statues.    |

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- 2-4. For each of the following combination of Kaxna artifacts, select Yes if, based on the information provided, the cost of all pertinent techniques described can be shown to be within the museum's first-year Kaxna budget. Otherwise, select NO.

|   | YES | NO |                                                              |
|---|-----|----|--------------------------------------------------------------|
| A |     |    | 2 bone implements and 5 fired-clay cups decorated with gold. |
| B |     |    | 7 wooden statues and 20 metal implements                     |
| C |     |    | 15 wooden statues decorated with bone                        |

# 回顾本节课授课要点

6.1

多源推理题解题攻略



**THANK YOU**