Dcode: Official Instructions

The Objective

The goal of the game is to be the first player to successfully decode all opponents' secret words while keeping your own codes "protected" from being solved.

1. Setup

Each player uses three specific sheets:

- **The Coding Blank:** Your private workspace. Write your two secret words clearly, assign their keys, and perform the encryption here.
- **The Secret Blank:** Once your words are coded, write the final encrypted messages here and place them on the table for all players to see.
- **The Cipher Sheet:** Your reference tool containing:
  - **Vigenère Square:** For Vigenère encryption (the key must be shared publicly).
  - **5x5 Polybius Grid (J excluded):** For "Sum" encryption ($Row + Column$).
  - **Numbered Alphabet (1–26):** To be used for Caesar Cipher math.

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2. Decoys & Tricks

You have a total budget of **5 Decoy Points** to spread across your two words. These are used to break the mathematical logic of the ciphers. You are not required to use all your points; you may even use none.

1. **The Mirror (Cost: 1 Point):** Write the final encrypted string in reverse order.
   - *Example:* If your Caesar word is **"K-L-U"**, you share it as **"U-L-K"**.
   - *The Trick:* Opponents may waste turns looking for a key that doesn't exist until they realize the word is mirrored.
2. **The Ghost "_" (Cost: 1 Point per letter):** Replace any single letter or number in your code with an underscore.
   - *The Trick:* Removing a sum (like **2** in Polybius) deletes the only clue for specific letters like **"A"**.
3. **The Phantom (Cost: 1 Point per letter):** Insert a fake character or replace a real one.
   - **The Insertion:** Add an extra character at the start, middle, or end (e.g., a 4-letter word becomes 5 letters).
   - **The Swap:** Change one correct coded letter to a random one.
   - *The Trick:* In Vigenère, the opponent will find one "wrong" letter and won't know if that specific letter is the decoy or if the entire word is different.

Strategy Tip: You can create a **"Heavy Trap"** by putting all 5 points into one word, or a **"Balanced Defense"** by spreading them out. The **"Vigenère Bait"** is also effective—since the key is public, use mirrors or phantoms to make opponents doubt their own math.

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3. Gameplay

Once all coded words are shared, players take turns asking one another questions to narrow down the possibilities.

I. Caesar Questions (Finding the Shift)

Since the key is unknown, use these to pinpoint the secret shift number:

- **Parity:** "Is your secret key an even number?"
- **Range:** "Is the secret key greater than 10?"
- **The Result:** "If you apply your key to the letter 'A', is the resulting letter a vowel?"
- **Math:** "Is the secret key a multiple of 3 or 5?"
- **The Cross:** "Does the key shift the letter 'M' past the end of the alphabet (Z)?"

II. Polybius Sum Questions (Row + Column)

Because a sum (e.g., 6) can represent multiple letters, use these to find the coordinates:

- **Comparison:** "For the 3rd letter, is the **Row** number higher than the **Column** number?"
- **Coordinate Parity:** "Is the Row of the 2nd letter an even number?"
- **The Diagonal:** "Is the letter located on the diagonal (where Row and Column are the same)?"
- **Grid Area:** "Is the letter located in the first two rows (Row 1 or 2)?"
- **The Result:** "Is the hidden letter a vowel?"

III. Vigenère & Decoy Questions (Identifying Traps)

Since the Vigenère key is public, use these to detect "lies" or decoys:

- **The Phantom:** "Is the 4th character a 'Phantom' letter?"
- **The Ghost:** "Does the underscore (_) represent a vowel?"
- **The Mirror:** "Is the entire string of this word written in reverse?"
- **Decoy Count:** "How many of your 5 total decoys are used in this specific word?"
- **Verification:** "If I decode the 1st letter using the public key, do I get the correct original letter?"

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4. Winning the Game

The winner is the first player to correctly decode all of their opponents' words while their own codes remain unsolved.