Kryptos 2023 - Challenge 1: Solution

First, we note that the stamp being used on all three postcards is the newer U.S. stamp commemorating women cryptologists during World War II. ☺

Each postcard has a short message composed of English words, but the messagea appear to be nonsense. In such a case, one might expect some variation of a Null cipher. That is, a single letter from each word may be used to generate the plaintext. Quickly checking the first letter of each word, or the last letter of each word, or other similar ideas does not yield anything very helpful. But, each postcard also has a symbol or series of symbols on it.

The second postcard's symbol has a mathematical expression followed by an arrow, much like you would see if studying limits in calculus. In fact, this expression approaches the mathematical constant "e" as x takes on larger and larger values. e = 2.718281828… If one takes the 2nd letter of the first word, the 7th letter of the second word, the 1st letter of the third word, etc. one gets: simioneday, which matches a name on the roster: Simione Day.

The symbol on the first postcard has two different sized circles with diameters. Of course, the most famous mathematical constant, π, relates the ratio of a circumference to a diameter of any circle. Using π = 3.14159265… one can look at the appropriate numbered letter in each word to reveal: paulmasey or Paul Masey, who is also listed on the roster.

The symbol on the third postcard most likely represents another mathematical constant. In this case, the symbol represents the limit of the ratio of consecutive Fibonacci numbers. This ratio approaches the constant sometimes referred to as the Golden Ratio: φ = 1.618033988… Again, taking the appropriately numbered letters from each word gives us the last mole: Carmen Diaz.

The three moles are: Simione Day, Paul Masey, and Carmen Diaz.