Affine Cipher Report

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This cipher actually took less time to break because of dumb luck. Similarly I started by tokenizing the text into unigrams, bigrams, and trigrams and counting their frequencies. The top unigram frequencies for this cipher are:

[('Y', 19), ('H', 14), ('T', 11), ('Q', 10), ('F', 9), ('G', 9), ('E', 8), ('L', 6), ('N', 6), ('X', 6), ('I', 5), ('J', 5), ('W', 5), ('K', 4), ('C', 3)]

Upon analyzing the unigram frequencies, we find Y to be the most frequently occurring unigram. We can assume for now that Y->E. The next step I tried was simply substituting the second most common unigram for the second most common letter in English. This is H->T. I then wrote a tool to set these up as simultaneous equations to solve for the key. This gives us the key to be (11, 6) and the cipher text decodes to:

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