Solution for Challenge 2:

The idea here is to identify some "cribs". That is, words or phrases that you think are part of the plaintext message. For example, the message may contain the words "jitterbug", "cataluna", or "meet". One can then take "jitterbug", for example, and line it up under the ciphertext to see if a recognizable keyword was used for the Vigenere encipherment. One location gives a clue:

```
Cipher: ZEGXV NDXMU BKZJY YMTUS HTGAT RMIHV

Plain:



Cipher: CVYOL IFRAQ HGFIA ENGZK YYXAV XPXFO
Plain:                              ji tterb
Key:                              rn ewton

Cipher: FKKPZ XQSGT WVQMJ VOGLP CONIE JUTVO
Plain:  ug
Key:    le
```

One can guess now that "rnewtonle" is part of the key. One recognizes the name "Newton" and might expect that the "LE" is the beginning of the other inventor of calculus "LEIBNIZ". Filling in this information, yields:

```
Cipher: ZEGXV NDXMU BKZJY YMTUS HTGAT RMIHV

Plain:



Cipher: CVYOL IFRAQ HGFIA ENGZK YYXAV XPXFO
Plain:                              ji tterb
Key:                              rn ewton

Cipher: FKKPZ XQSGT WVQMJ VOGLP CONIE JUTVO
Plain:  ugcom pr
Key:    leibn iz
```

From here, one could try to guess the next plaintext word which begins "compr", or try to find other parts of the key by trying to place "meet" or "cataluna" in various positions. The end result is the key "newtonleibnizeuler".

The original plaintext becomes:

Make haste to café Nicholas. Nine hundred hrs. next Tuesday. Agent jitterbug compromised in cataluna affair.