

1. Convert the message "The mole lives in Manhattan and plays for the Yankees." into character code + 100, and convert to binary.

**BaseForm**[% , 2]

```
{10101002, 11010002, 11001012, 1000002, 11011012, 11011112, 11011002,  
11001012, 1000002, 11011002, 11010012, 11101102, 11001012, 11100112,  
1000002, 11010012, 11011102, 1000002, 10011012, 11000012, 11011102, 11010002,  
11000012, 11101002, 11101002, 11000012, 11011102, 1000002, 11000012, 11011102,  
11001002, 1000002, 11100002, 11011002, 11000012, 11110012, 11100112, 1000002,  
11001102, 11011112, 11100102, 1000002, 11101002, 11010002, 11001012, 1000002,  
10110012, 11000012, 11011102, 11010112, 11001012, 11001012, 11100112, 1011102}
```

2. Convert the same message as above with the same method, but this time into hexadecimal.

**BaseForm**[% , 16]

```
{5416, 6816, 6516, 2016, 6d16, 6f16, 6c16, 6516, 2016, 6c16, 6916, 7616, 6516,  
7316, 2016, 6916, 6e16, 2016, 4d16, 6116, 6e16, 6816, 6116, 7416, 7416, 6116,  
6e16, 2016, 6116, 6e16, 6416, 2016, 7016, 6c16, 6116, 7916, 7316, 2016, 6616, 6f16,  
7216, 2016, 7416, 6816, 6516, 2016, 5916, 6116, 6e16, 6b16, 6516, 6516, 7316, 2e16}
```

3. Using the seed 888179171097998121512777 for *Mathematica*'s random number generation, decrypt the given character code list which has been encrypted using the same random-number-based key.

**FromCharacterCode**[Mod[SeedRandom[888 179 171 097 998 121 512 777];

TransMit1 - RandomInteger[999, Length[TransMit1]], 1000] - 100]

The secret stuff is really secret. I tried to uncover the secret,

but they were so secretive about their secrets that I failed again.