

1. Decipher message

MPQ BJI XOY FJI SSC BYW PJU LUV PSY SDP PMK BJR ADZ XMD Q

using vernam two-tape with keys *four* and *eternal*.

2. Find lcm(51648,14944).
3. For this problem you will be using the Vernam crypto system.

|   |   |       |   |   |       |   |   |       |   |   |       |
|---|---|-------|---|---|-------|---|---|-------|---|---|-------|
| A | - | 00000 | H | - | 00111 | O | - | 01110 | V | - | 10101 |
| B | - | 00001 | I | - | 01000 | P | - | 01111 | W | - | 10110 |
| C | - | 00010 | J | - | 01001 | Q | - | 10000 | X | - | 10111 |
| D | - | 00011 | K | - | 01010 | R | - | 10001 | Y | - | 11000 |
| E | - | 00100 | L | - | 01011 | S | - | 10010 | Z | - | 11001 |
| F | - | 00101 | M | - | 01100 | T | - | 10011 |   |   |       |
| G | - | 00110 | N | - | 01101 | U | - | 10100 |   |   |       |

Using the above code turn the message “rice” into a binary message. Next make a Vernam key by flipping a coin (enough times to make a big enough key). Then encipher the message using the key.

4. Find the schedule of classes for the spring semester on your my.sandiego.edu site. Find three classes that you are thinking about and write down the classes and the times.