

1. Suppose you know the following message was enciphered with Hill (2 dimensions with mod 29):

EL JC XC !D I. .M WN

Break it knowing the first word of the message is “start”.

2. Encipher the message “Join the math club today” using Playfair system with key work “commons.”
3. Decipher the message:

VT XH CV CV GL EN DY UG NO RE RH PN QI US

using the Playfair system with key work “eternal.”

4. Encipher the following Charles Dickens quote  
“Never close your lips to those whom you have already opened your heart.”  
using rectangular transposition with key word *knight*.
5. Decipher the following message

UHFAE SHEHI IDMT0 LVETF TTSNI FOOEO TTAEK OSELY MSAIE TCSCO VNEFS  
IPMED IBOEG XIUNP ANIFE DPICT RGEYA E

knowing it was encipher with rectangular transposition with key word *steamer*. Make sure restore spacing between words, capitalization and add punctuation to make it readable.

6. Look on the website for homecoming events at USD. Choose an event that you would be most likely to attend and write that down. I won't make you actually go to the event but consider doing it, it builds school spirit.