Experiment 8

Decrypt by using Hill cipher

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Decrypt Hill Cipher:

```
clc;
clear all;
close all;

c=input('enter ciphertext: ','s');

lc=length(c);

k=[3 1;6 5];

d=fix(det(k)); %find d inverse
a1=[1 3 5   7  9 11   15 17 19 21 23 25];
a2=[1 9 21 15 3  19  7  23 11 5   17 25];
s=0;

for i=1:12

    if a1(i)== mod(d,26)

        s=i;
    end
End
id=a2(s);

adj=round(inv(k)*d); %find adjoint matrix
adj=mod(adj,26);
ik=mod(adj*id,26) % find Inverse matrix mod 26

for i=1:2:lc  % decryption code
    r=double(c(i:i+1))'-65;
    p(i:i+1)=mod(ik*r,26);
end
p=char(p+97);
disp(['The plaintext : ' p])
```

```
    Enter ciphertext : KUMT
    The plaintext: math
```