```
function testingInputs

% DEA
i=16;
%for 64bit key, add K = subkey(key) before encrypting or decrypting
%%Test1%%
A =
 0b0000000100100011010001010110011111000100110101011110011011110111 1;
key = 0b1111000011001100101010101111010101010110011001111000111 1;
 ciphertext = encryption(key,A)
% This is the corrrect output according to
% 'http://page.math.tu-berlin.de/~kant/teaching/hess/krypto-ws2006/
des.htm'


ciphertext =

    '1000010111101000000100110101010000001111000010101011010000000101'


%%Test2
% decrypting the ciphertext
A =
 0b1000010111101000000100110101010000001111000010101011010000000101; %which
 is the Ciphertext
plaintext = decryption(key,A)


plaintext =

    '0000000100100011010001010110011111000100110101011110011011110111 1'


%Make sure to change code depending on key size!!
%%Test3
A =
 0b1000011110000111100001111000011110000111100001111000011110000111;
key = 0x0E329232EA6D0D73;
K = subkey(key); %converting to 56 bit key
ciphertext = encryption(K,A)


ciphertext =

    '0000000000000000000000000000000000000000000000000000000000000000'


 %%Test4
% decrypting the ciphertext

A =
 0b0000000000000000000000000000000000000000000000000000000000000000;
plaintext = decryption(K,A)
```

```
%these answers are correct

%%question3

plaintext =

    '1000011110000111100001111000011110000111100001111000011110000111'

end
```

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