To confirm the correctness of the encoding, we will compare the image obtained after the Huffman processing with the original. We will ensure that both images have the same dimensions before performing the comparison.

```
apokodikopoihsh = huffmandeco(kodikopoihsh, huffmanDict);
apokodikopoihsh = reshape(apokodikopoihsh, size(I));
elenxos = isequal(I, apokodikopoihsh);
disp('Einai sosti i kodikopoihsh?');
disp(elenxos);
```

he isequal function compares the two images. Running the code, we get:

```
Einai sosti i kodikopoihsh?
    1
```

o the encoding is correct (1 = true), as expected, since Huffman is a lossless method.

Next, we will calculate the number of bits in the original image and in the encoded image.

```
bits_diadikhs_anaparastashs = numel(I) * 8;
bits_huffman = length(kodikopoihsh);
```

he numel(I) function finds the number of pixels in the image and multiplies it by 8 because, as we have mentioned, each pixel is represented by 8 bits.

Finally, we calculate the compression ratio:

```
j = bits_huffman / bits_diadikhs_anaparastashs;
```

and the result is:

```
j:
    0.4797
```