

Result

Outline

- Discrete Cosine Transform
- Discrete Sine Transform
- Discrete Hartley Transform

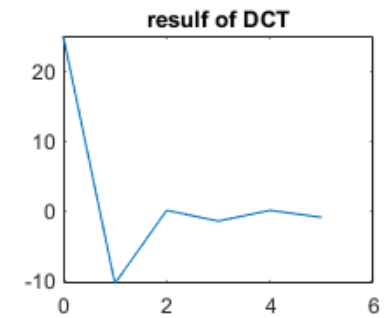
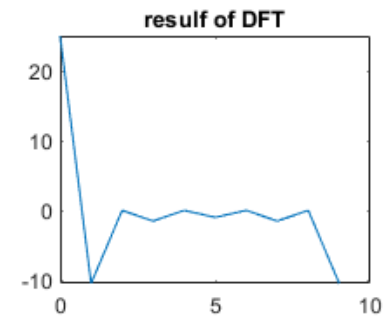
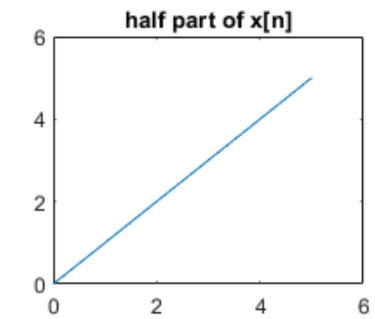
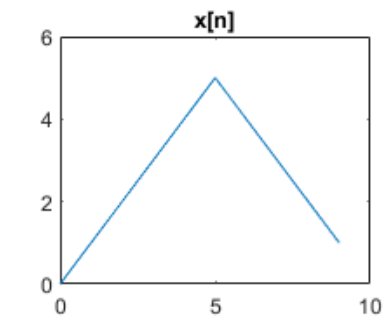
Discrete Cosine Transform

input:

$x[n] = [0 \ 1 \ 2 \ 3 \ 4 \ 5 \ 4 \ 3 \ 2 \ 1]$

result:

```
Discrete Cosine Transform (Xc[m], m = 0 ~ floor(N/2)):  
 25.000000000000000  
-10.472135954999578  
 -0.000000000000002  
-1.527864045000419  
-0.000000000000001  
-1.000000000000000
```



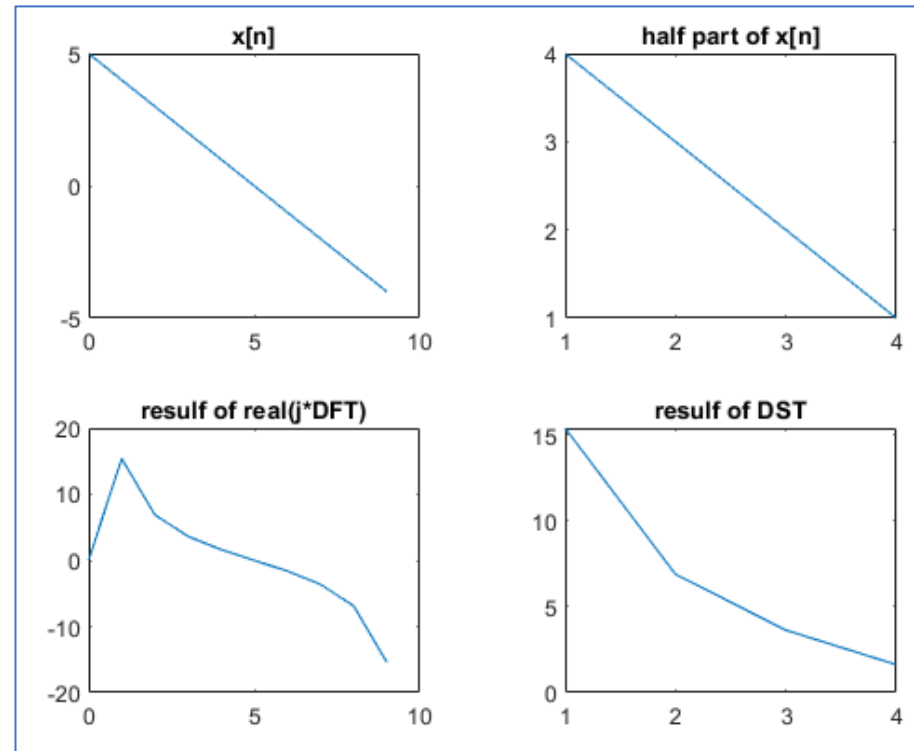
Discrete Sine Transform

input:

$x[n] = [5 \ 4 \ 3 \ 2 \ 1 \ 0 \ -1 \ -2 \ -3 \ -4]$

result:

```
Discrete Sine Transform (Xs[m], m = 1 ~ floor(N/2)-1):  
15.388417685876266  
6.881909602355869  
3.632712640026805  
1.624598481164533
```



Discrete Hartley Transform

input:

$x[n] = [1 \ 2 \ 3 \ 4]$

result:

```
Discrete Hartley Transform (Xh[m], m = 0 ~ N-1):  
10.000000000000000  
-4.000000000000000  
-1.999999999999999  
0.000000000000002
```

