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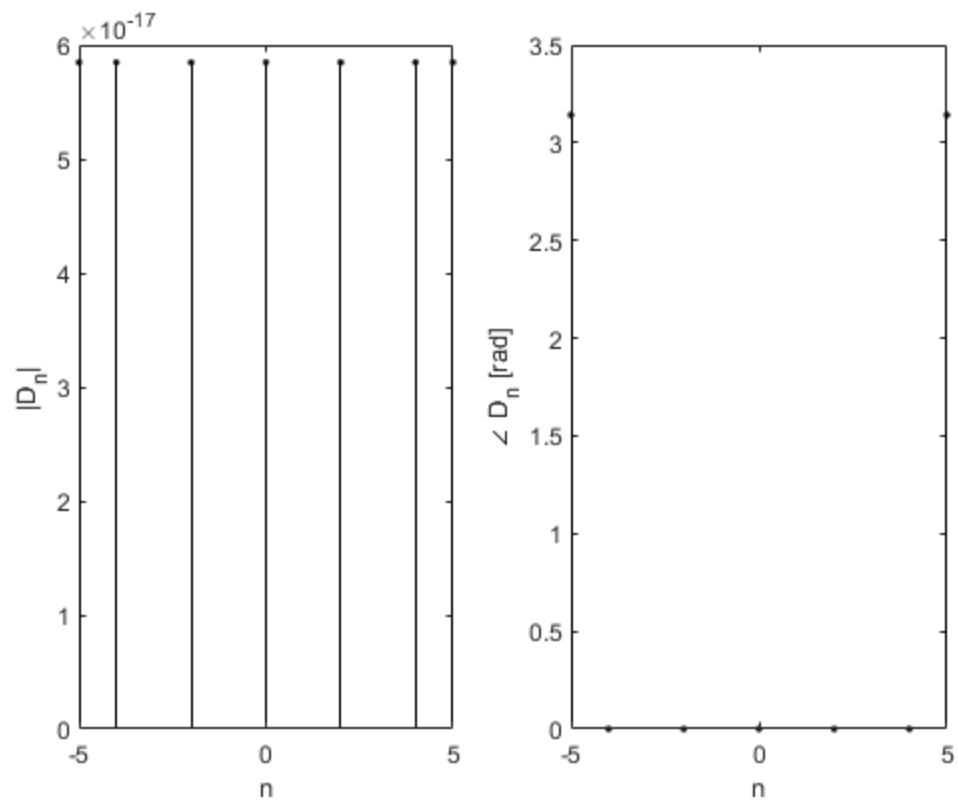
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A.4

a)

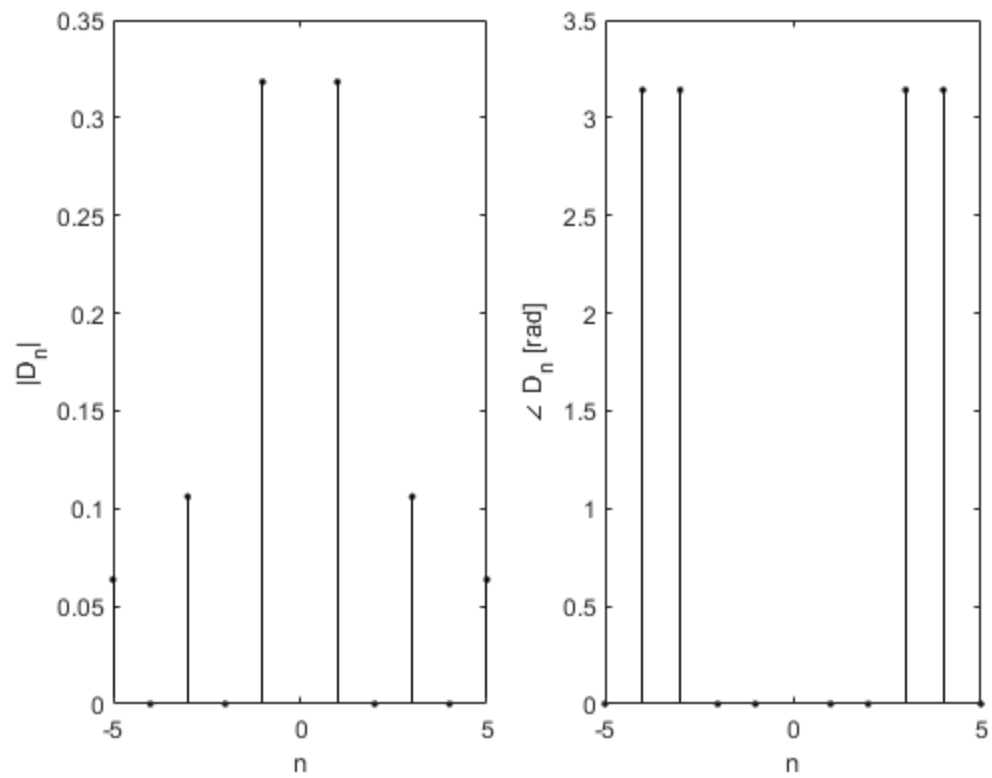
x1(t):

```
figure(1);
n = (-5:5);
D_n = (1./(2.*pi.*(3-n))).*sin((3-n).*pi)+(1./
(2.*pi.*(3+n))).*sin((3+n).*pi)+(1./(4.*pi.*(1-n))).*sin((1-
n).*pi)+(1./(4.*pi.*(1+n))).*sin((1+n).*pi);
subplot(1,2,1);
stem(n,abs(D_n),'.k');
xlabel('n');
ylabel('|D_n|');
subplot(1,2,2);
stem(n,angle(D_n),'.k');
xlabel('n');
ylabel('\angle D_n [rad]');
```



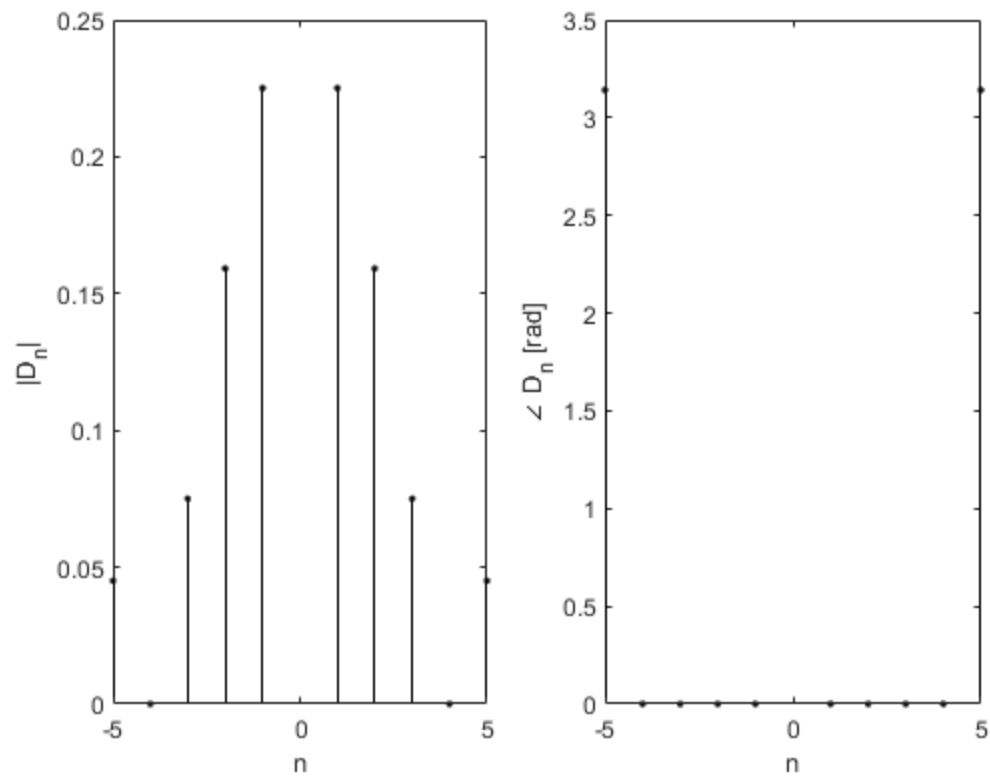
x2(t):

```
figure(2);
n = (-5:5);
D_n = (1./(n.*pi)).*sin((n.*pi)/2);
subplot(1,2,1);
stem(n,abs(D_n),'.k');
xlabel('n');
ylabel('|D_n|');
subplot(1,2,2);
stem(n,angle(D_n),'.k');
xlabel('n');
ylabel('\angle D_n [rad]');
```



x3(t):

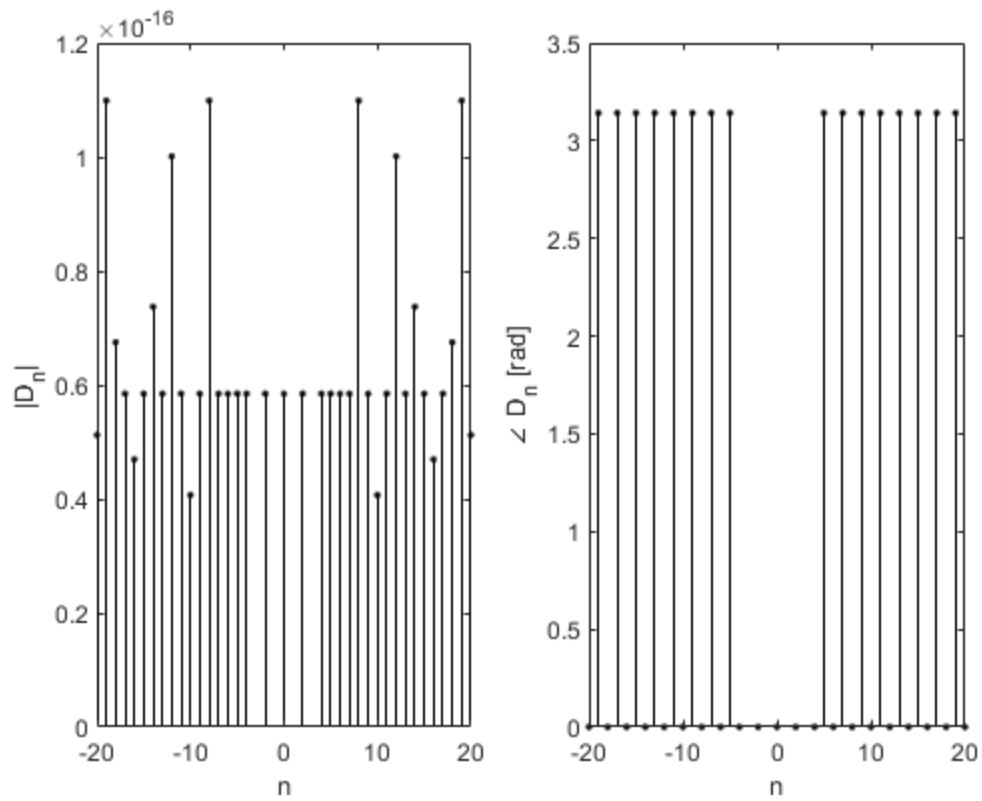
```
figure(3);  
n = (-5:5);  
D_n = (1./(n.*pi)).*sin((n.*pi)/4);  
subplot(1,2,1);  
stem(n,abs(D_n),'.k');  
xlabel('n');  
ylabel('|D_n|');  
subplot(1,2,2);  
stem(n,angle(D_n),'.k');  
xlabel('n');  
ylabel('\angle D_n [rad]');
```



b)

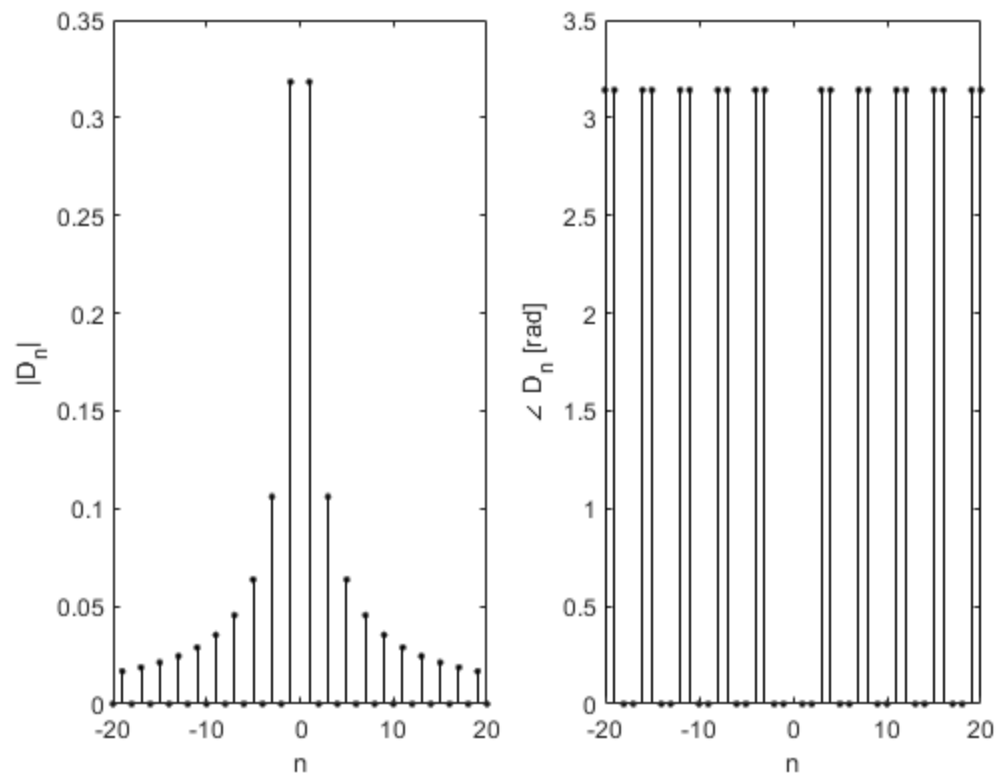
$x_1(t)$:

```
figure(4);
n = (-20:20);
D_n = (1./(2.*pi.*(3-n))).*sin((3-n).*pi)+(1./
(2.*pi.*(3+n))).*sin((3+n).*pi)+(1./(4.*pi.*(1-n))).*sin((1-
n).*pi)+(1./(4.*pi.*(1+n))).*sin((1+n).*pi);
subplot(1,2,1);
stem(n,abs(D_n),'.k');
xlabel('n');
ylabel('|D_n|');
subplot(1,2,2);
stem(n,angle(D_n),'.k');
xlabel('n');
ylabel('\angle D_n [rad]');
```



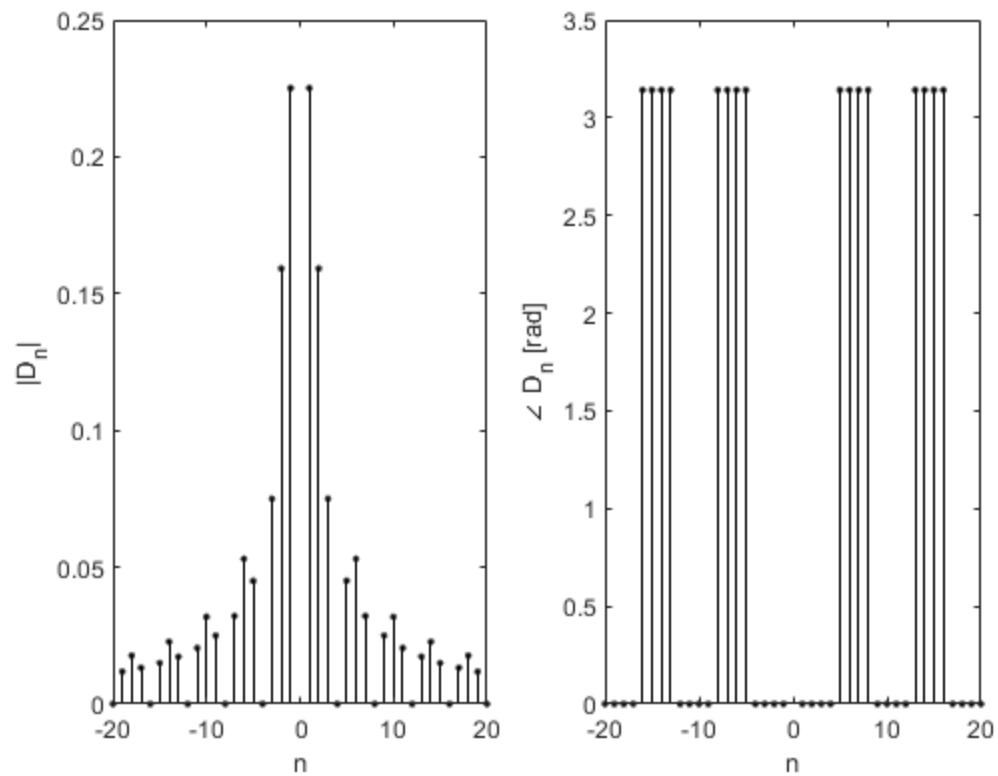
x2(t):

```
figure(5);
n = (-20:20);
D_n = (1./(n.*pi)).*sin((n.*pi)/2);
subplot(1,2,1);
stem(n,abs(D_n),'.k');
xlabel('n');
ylabel('|D_n|');
subplot(1,2,2);
stem(n,angle(D_n),'.k');
xlabel('n');
ylabel('\angle D_n [rad]');
```



x3(t):

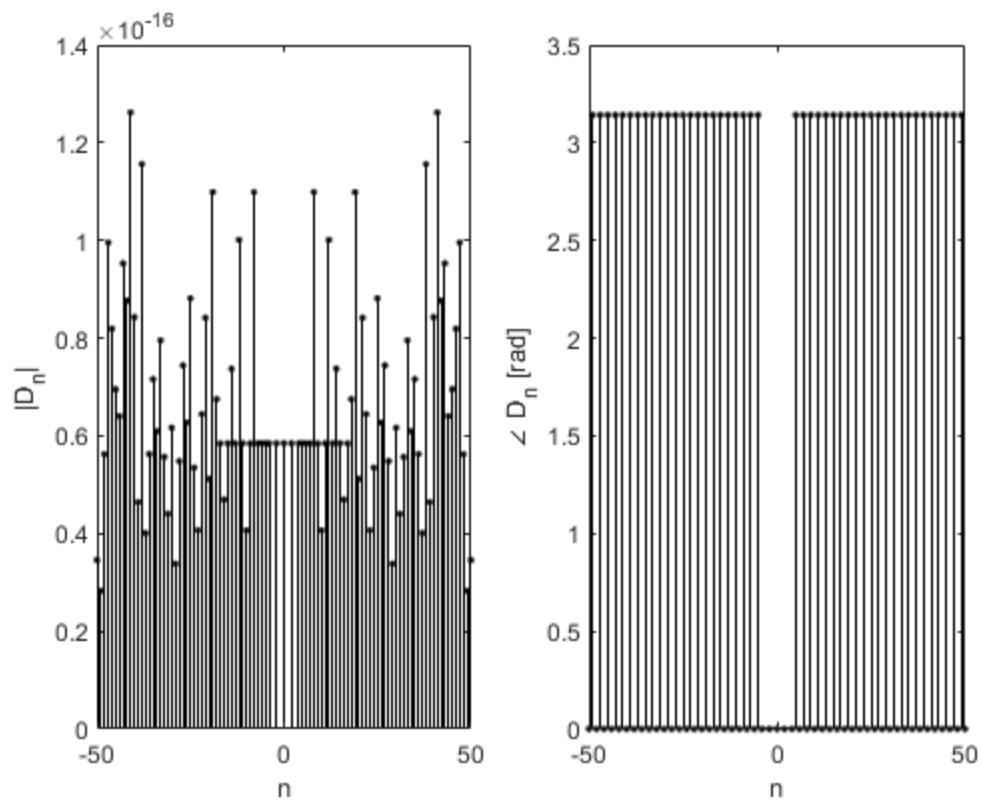
```
figure(6);
n = (-20:20);
D_n = (1./(n.*pi)).*sin((n.*pi)/4);
subplot(1,2,1);
stem(n,abs(D_n),'.k');
xlabel('n');
ylabel('|D_n|');
subplot(1,2,2);
stem(n,angle(D_n),'.k');
xlabel('n');
ylabel('\angle D_n [rad]');
```



c)

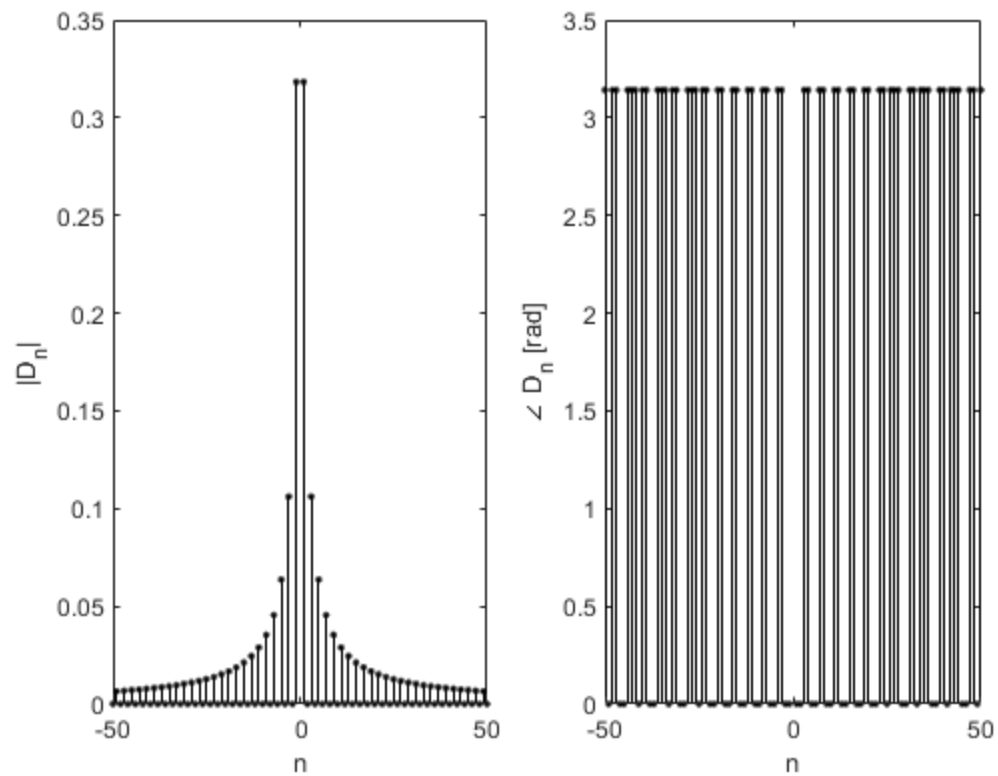
$x_1(t)$:

```
figure(7);
n = (-50:50);
D_n = (1./(2.*pi.*(3-n))).*sin((3-n).*pi)+(1./
(2.*pi.*(3+n))).*sin((3+n).*pi)+(1./(4.*pi.*(1-n))).*sin((1-
n).*pi)+(1./(4.*pi.*(1+n))).*sin((1+n).*pi);
subplot(1,2,1);
stem(n,abs(D_n),'.k');
xlabel('n');
ylabel('|D_n|');
subplot(1,2,2);
stem(n,angle(D_n),'.k');
xlabel('n');
ylabel('\angle D_n [rad]');
```



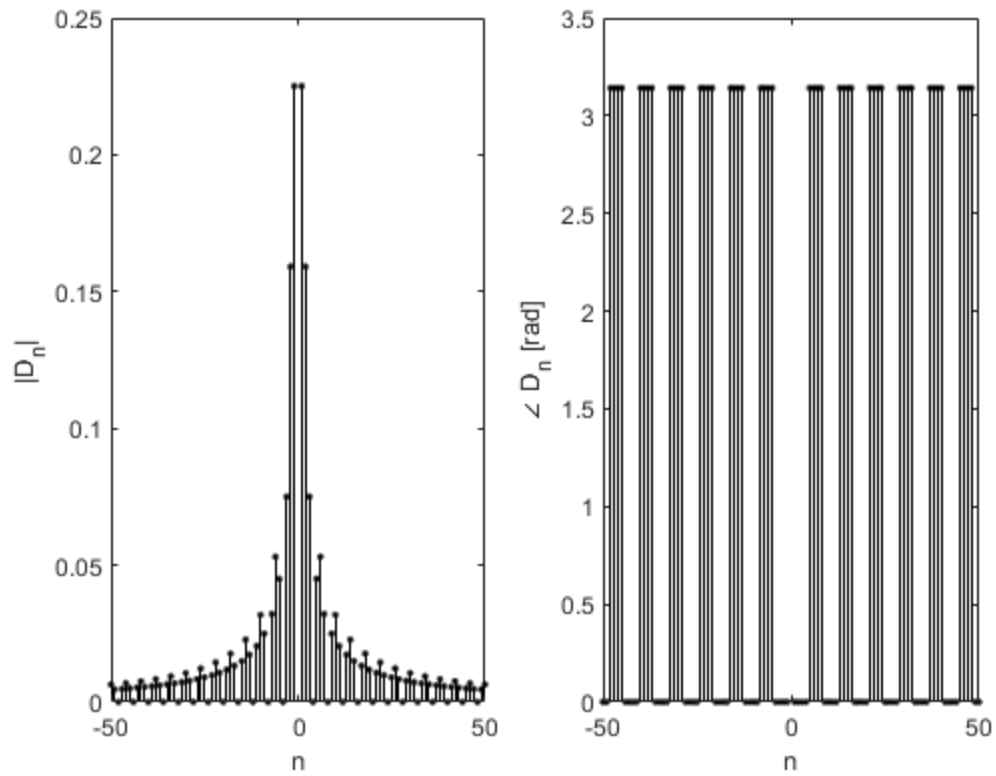
x2(t):

```
figure(8);
n = (-50:50);
D_n = (1./(n.*pi)).*sin((n.*pi)/2);
subplot(1,2,1);
stem(n,abs(D_n),'.k');
xlabel('n');
ylabel('|D_n|');
subplot(1,2,2);
stem(n,angle(D_n),'.k');
xlabel('n');
ylabel('\angle D_n [rad]');
```

x3(t):

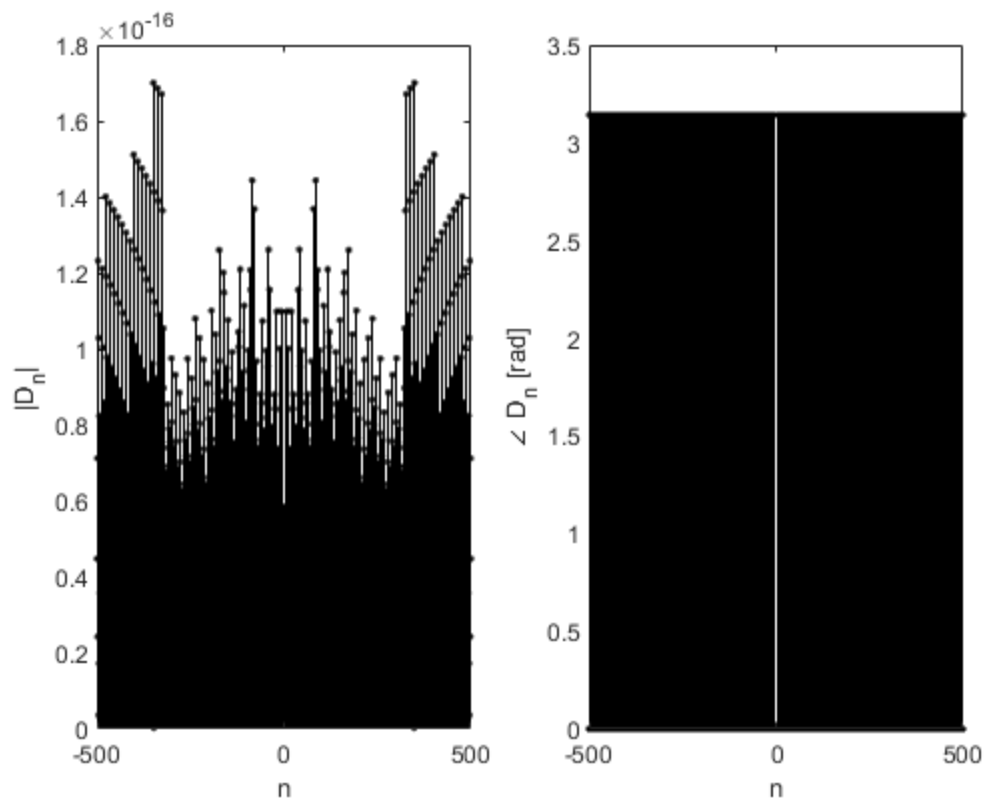
```
figure(9);
n = (-50:50);
D_n = (1./(n.*pi)).*sin((n.*pi)/4);
subplot(1,2,1);
stem(n,abs(D_n),'.k');
xlabel('n');
ylabel('|D_n|');
subplot(1,2,2);
stem(n,angle(D_n),'.k');
xlabel('n');
ylabel('\angle D_n [rad]');
```



d)

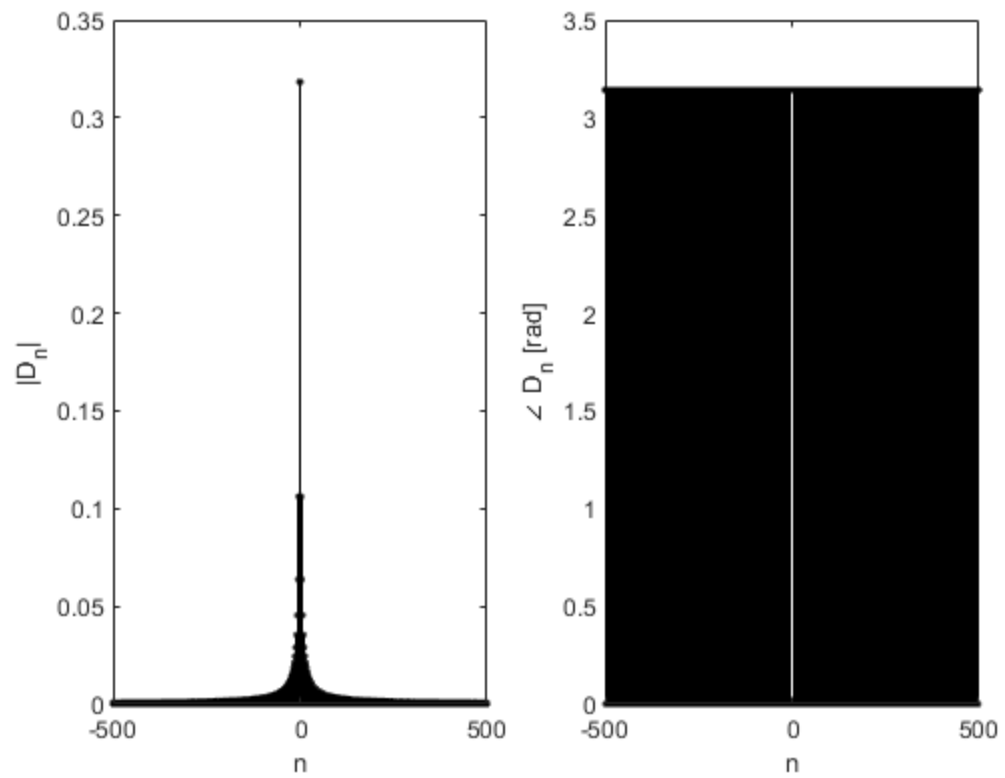
x1(t):

```
figure(10);
n = (-500:500);
D_n = (1./(2.*pi.*(3-n))).*sin((3-n).*pi)+(1./
(2.*pi.*(3+n))).*sin((3+n).*pi)+(1./(4.*pi.*(1-n))).*sin((1-
n).*pi)+(1./(4.*pi.*(1+n))).*sin((1+n).*pi);
subplot(1,2,1);
stem(n,abs(D_n),'.k');
xlabel('n');
ylabel('|D_n|');
subplot(1,2,2);
stem(n,angle(D_n),'.k');
xlabel('n');
ylabel('\angle D_n [rad]');
```



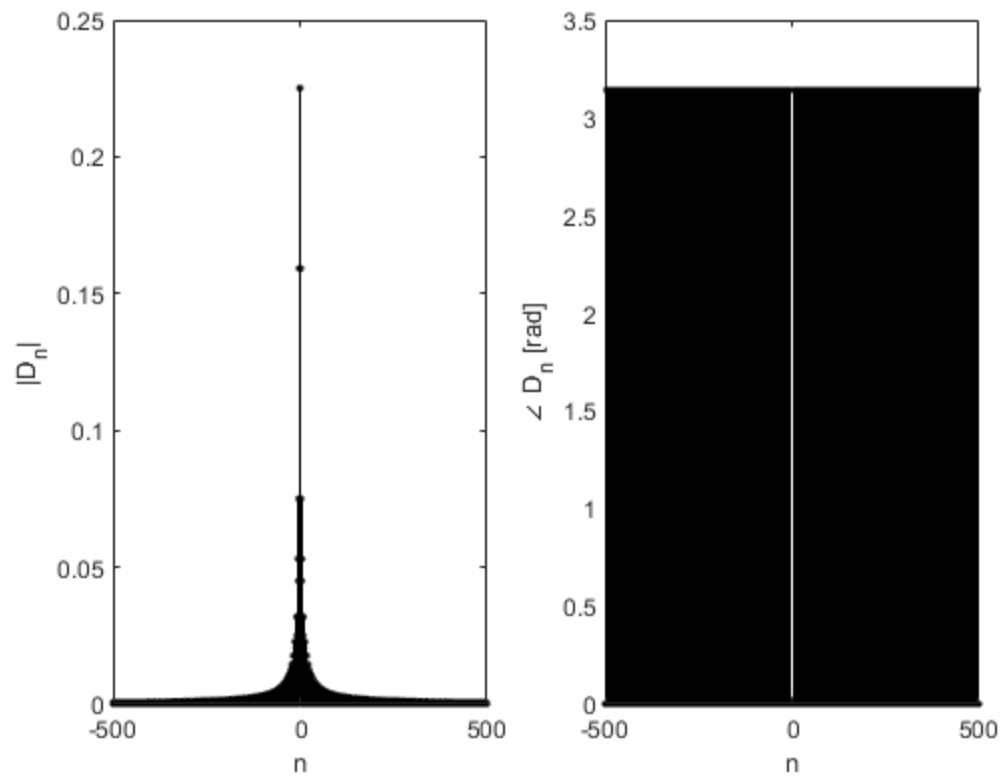
x2(t):

```
figure(11);
n = (-500:500);
D_n = (1./(n.*pi)).*sin((n.*pi)/2);
subplot(1,2,1);
stem(n,abs(D_n),'.k');
xlabel('n');
ylabel('|D_n|');
subplot(1,2,2);
stem(n,angle(D_n),'.k');
xlabel('n');
ylabel('\angle D_n [rad]');
```



x3(t):

```
figure(12);
n = (-500:500);
D_n = (1./(n.*pi)).*sin((n.*pi)/4);
subplot(1,2,1);
stem(n,abs(D_n),'.k');
xlabel('n');
ylabel('|D_n|');
subplot(1,2,2);
stem(n,angle(D_n),'.k');
xlabel('n');
ylabel('\angle D_n [rad]');
```

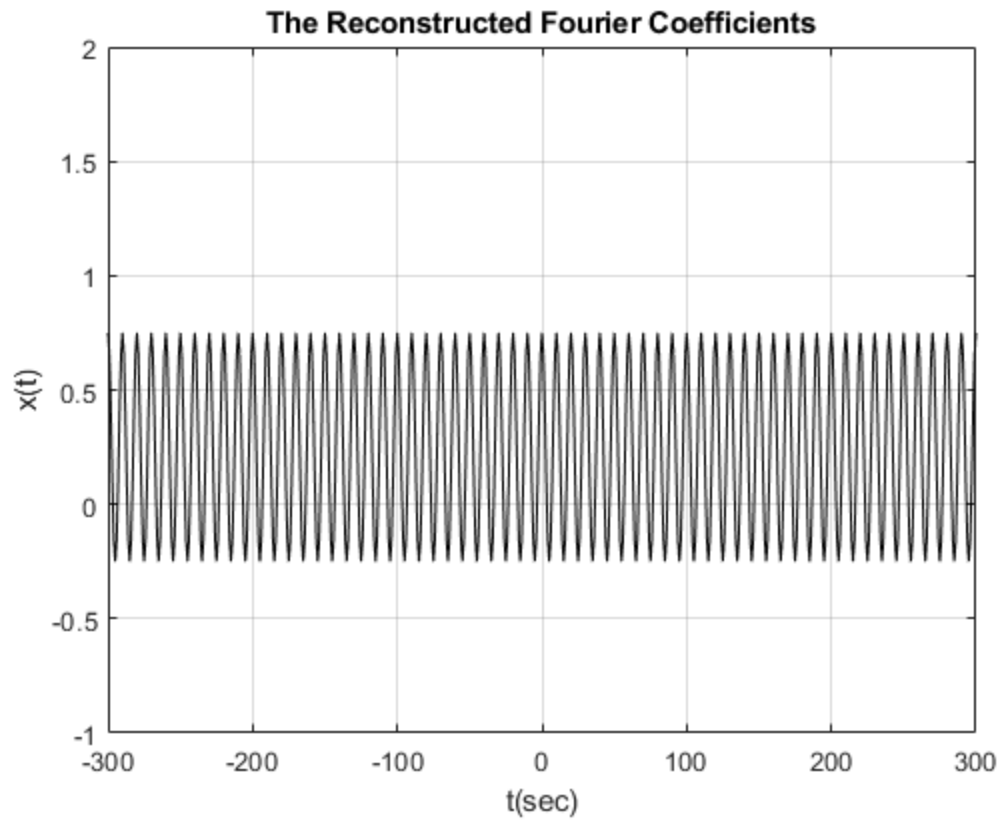


A.6

x1(t):

```
A5(Dn(1));
```

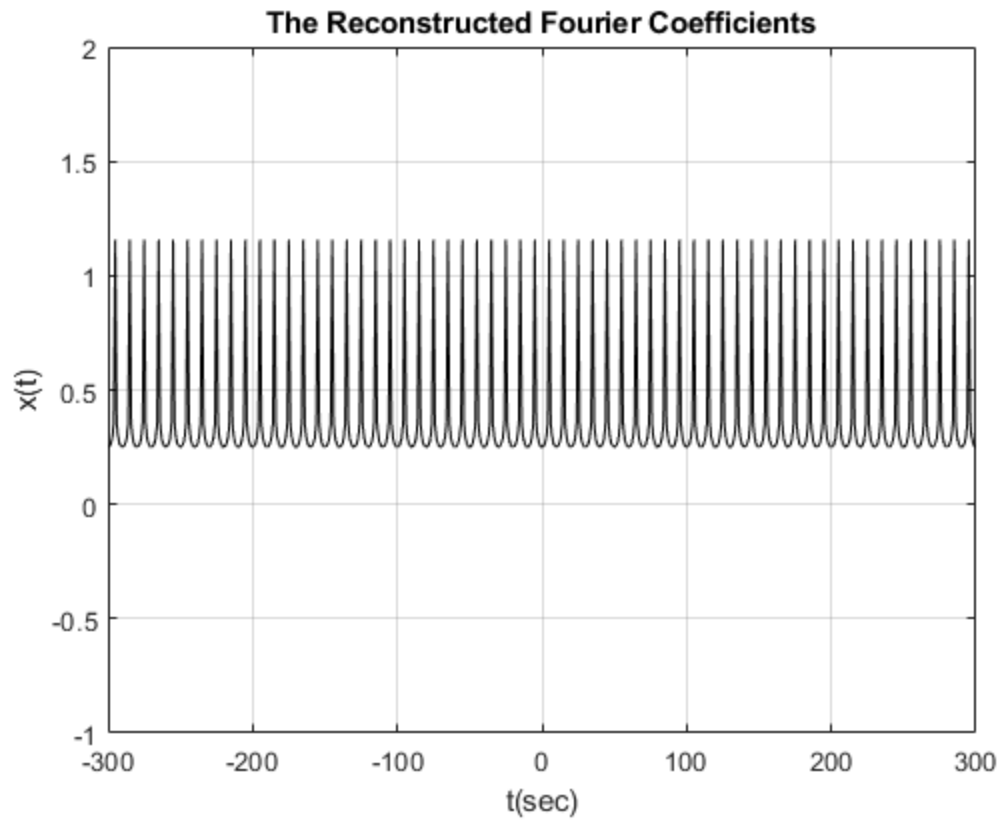
Warning: Imaginary parts of complex X and/or Y arguments ignored.



x2(t):

`A5(Dn(2));`

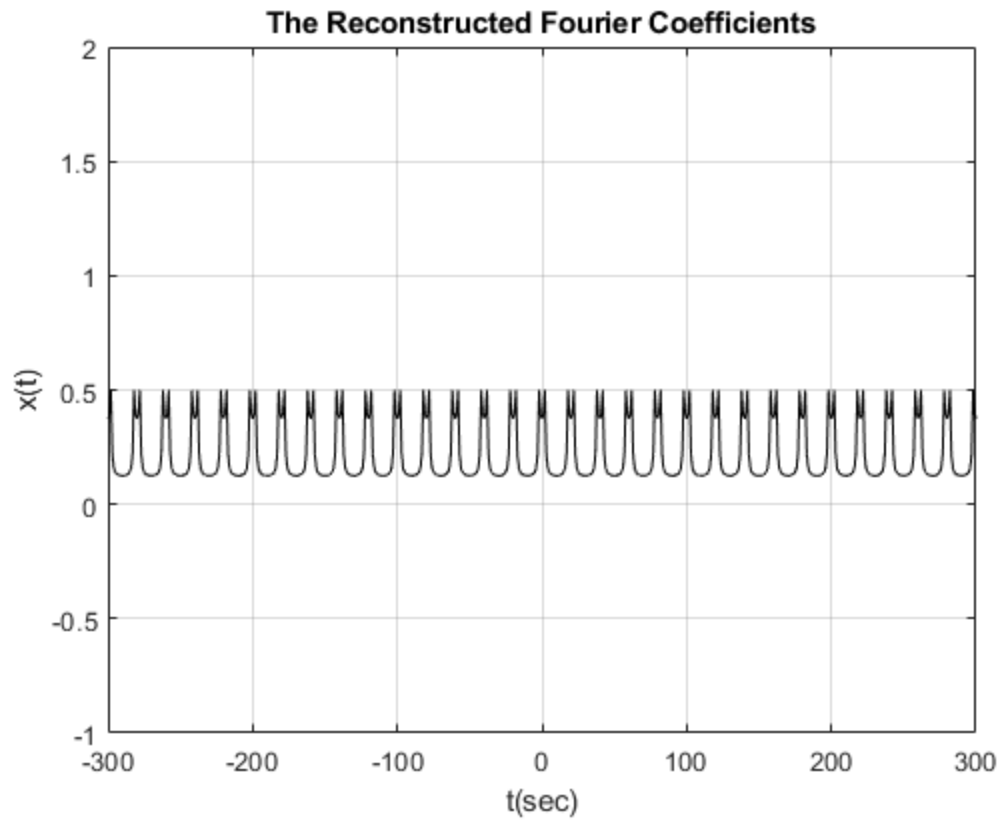
Warning: Imaginary parts of complex X and/or Y arguments ignored.



x3(t):

`A5(Dn(3));`

Warning: Imaginary parts of complex X and/or Y arguments ignored.



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