
```

% Symbolic Fourier Series
% ODD w0=pi, T0= 2*pi/w0, A=1
syms n t
w0=pi
T0= 2 % sec So f0 = 0.5 sec
A=1
n = 1:5 % Number of components
a0 = (1/T0)*int(A,t,0,1)
an = (1/T0)*int(A*cos(n*w0*t),t,0,1)
bn = (1/T0)*int(A*sin(n*w0*t),t,0,1)
% Answers
% a0 = 1/2
% an = [ 0, 0, 0, 0, 0]
% bn = [ 1/pi, 0, 1/(3*pi), 0, 1/(5*pi)]
n1=[0:1:6]
bn1= [0 bn 0]
stem(n1,bn1)
title('Spectrum from SymbolicFourierSpectrum1, w0=pi')
xlabel('Frequencies X .5Hz')

```

```
w0 =
```

```
3.1416
```

```
T0 =
```

```
2
```

```
A =
```

```
1
```

```
n =
```

```
1 2 3 4 5
```

```
a0 =
```

```
1/2
```

```
an =
```

```
[ 0, 0, 0, 0, 0]
```

```
bn =
```

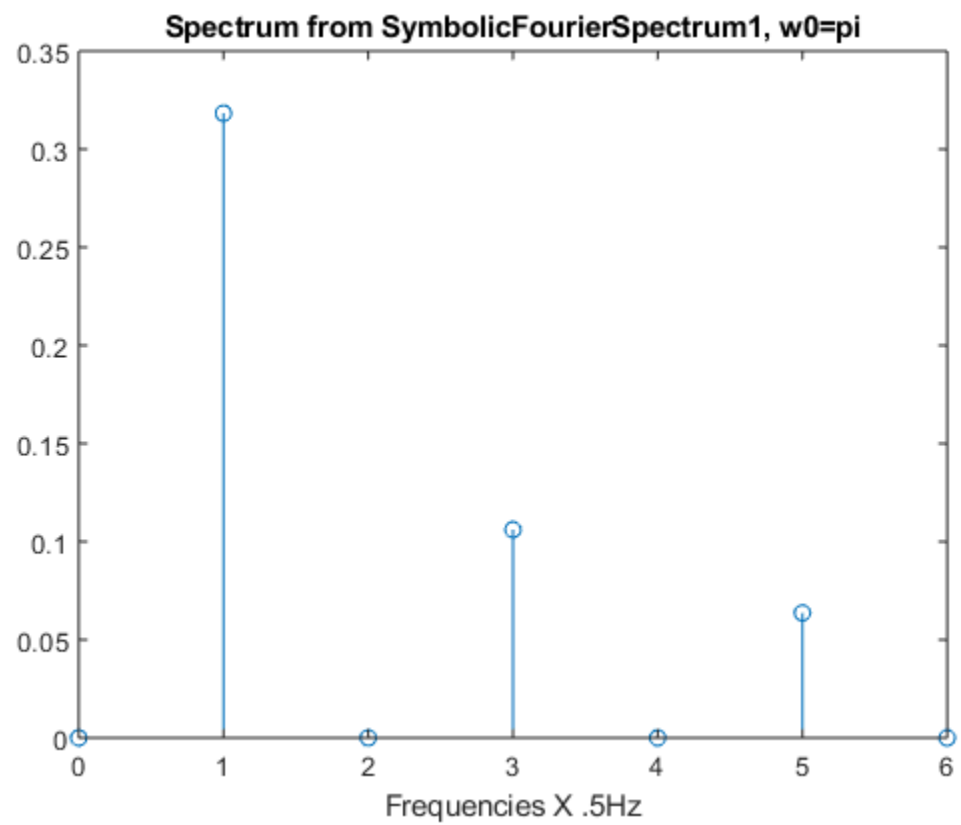
```
[ 1/pi, 0, 1/(3*pi), 0, 1/(5*pi)]
```

```
n1 =
```

```
0 1 2 3 4 5 6
```

```
bn1 =
```

```
[ 0, 1/pi, 0, 1/(3*pi), 0, 1/(5*pi), 0]
```



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