

```

% Plot the waveform
plot(t, x);
xlabel('Time (t)');
ylabel('Amplitude');
title('Waveform of x(t)');
grid on;
% Define the frequencies
f1 = 1; % Frequency of the cosine term
f2 = 2; % Frequency of the sine term

disp(['Frequency components present in x(t): ', num2str(f1), ' Hz and ', num2str(f2), ' Hz']);
% Define the period
T = 1;

% Define the signal x(t)
x = 3*cos(2*pi*t) + 2*sin(4*pi*t);

% Compute the average power
P = (1/T) * trapz(t, abs(x).^2);

disp(['Average power of x(t) over one period: ', num2str(P)]);
% Define the signal x[n]
x = [1, -2, 3, -4, 5];

% Compute the sum of all elements
sum_x = sum(x);

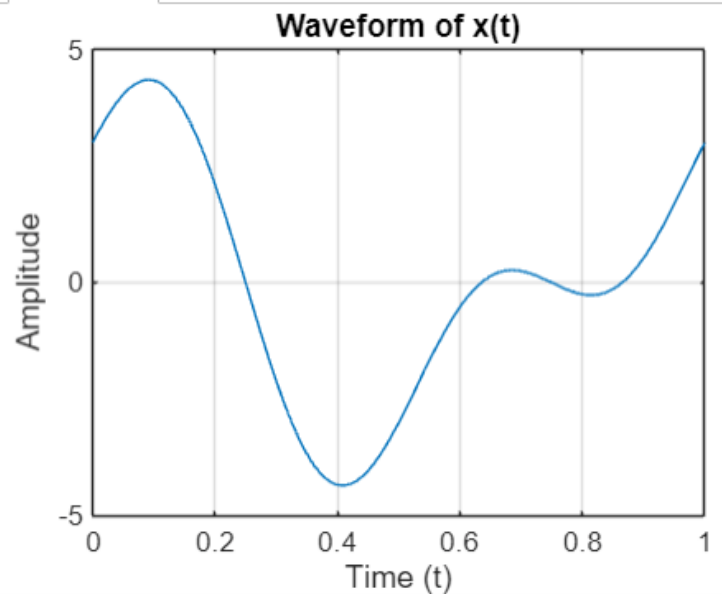
disp(['Sum of all elements in the signal: ', num2str(sum_x)]);
% Calculate the energy of the signal
energy_x = sum(abs(x).^2);

disp(['Energy of the signal: ', num2str(energy_x)]);

```

/MATLAB Drive/example2.m

```
1 % Define the time vector from 0 to 1
2 t = linspace(0, 1, 1000);
3
4 % Define the signal x(t)
5 x = 3*cos(2*pi*t) + 2*sin(4*pi*t);
6
7 % Plot the waveform
8 plot(t, x);
9 xlabel('Time (t)');
10 ylabel('Amplitude');
11 title('Waveform of x(t)');
12 grid on;
13 % Define the frequencies
14 f1 = 1; % Frequency of the cosine term
15 f2 = 2; % Frequency of the sine term
16
17 disp(['Frequency components present in x(t): 1 Hz and 2 Hz']);
18 % Define the period
19 T = 1;
20
21 % Define the signal x(t)
```



Command Window

```
>> example2
Frequency components present in x(t): 1 Hz and 2 Hz
Average power of x(t) over one period: 6.5
Sum of all elements in the signal: 3
Energy of the signal: 55
>>
```