```
N = 3;
n = 1:N;
```

```
an = (2 + 2 * (1 - n * pi) .* sin(pi * n) + 2 * (1 - n * pi) .* cos(pi * n)) ./ (n.^2 *
```

```
an = 1×100
    0.6366   -0.2170    0.2122   -0.1338    0.1273   -0.0948    0.0909   -0.0732 ···
```

```
an = 4 * (2 * sin(pi * n / 2).^2 - (pi * n .* sin(pi * n)) / 2) ./ (n.^2 * pi^2)
```

```
an = 1×3
    0.8106    0.0000    0.0901
```

```
wn = 2 * pi * n
```

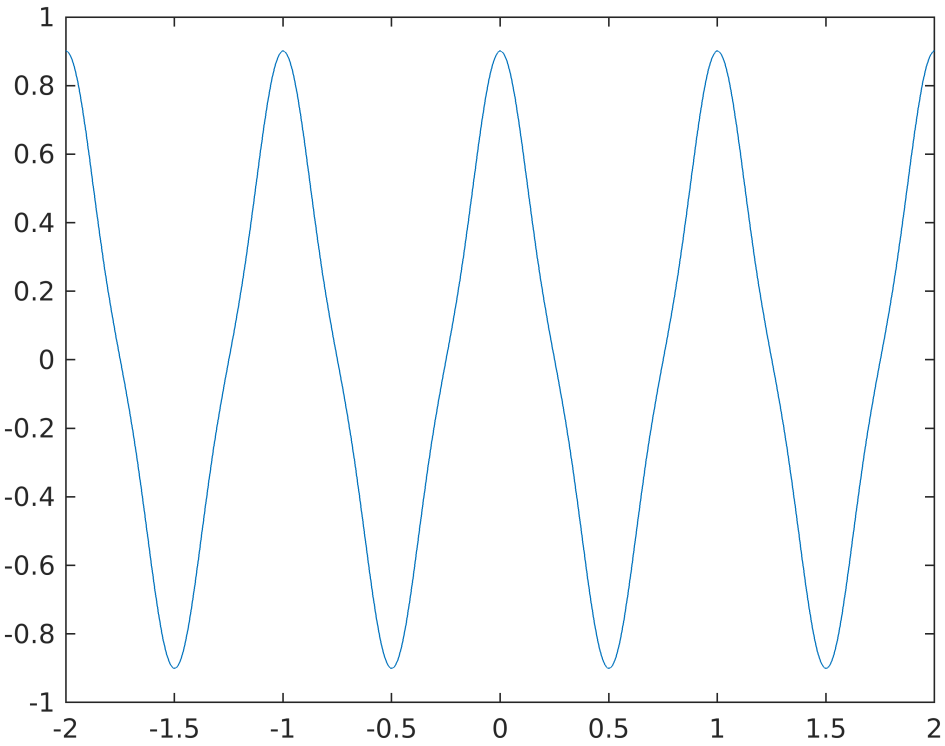
```
wn = 1×3
    6.2832   12.5664   18.8496
```

```
t = (-2:0.002:2)';
```

```
y = sum(an .* cos(wn .* t), 2)
```

```
y = 2001×1
    0.9006
    0.9005
    0.9001
    0.8995
    0.8986
    0.8974
    0.8960
    0.8944
    0.8925
    0.8903
     ⋮
```

```
plot(t, y)
```




```
syms t n
```

```
an = 2 * int((4 * t + 1) * cos(2 * pi * n * t), t, -0.5, 0) + 2 * int((-4 * t + 1) * co
```

```
an =
```

$$\frac{4\left(2\sin\left(\frac{\pi n}{2}\right)^2 - \frac{\pi n \sin(\pi n)}{2}\right)}{n^2 \pi^2}$$