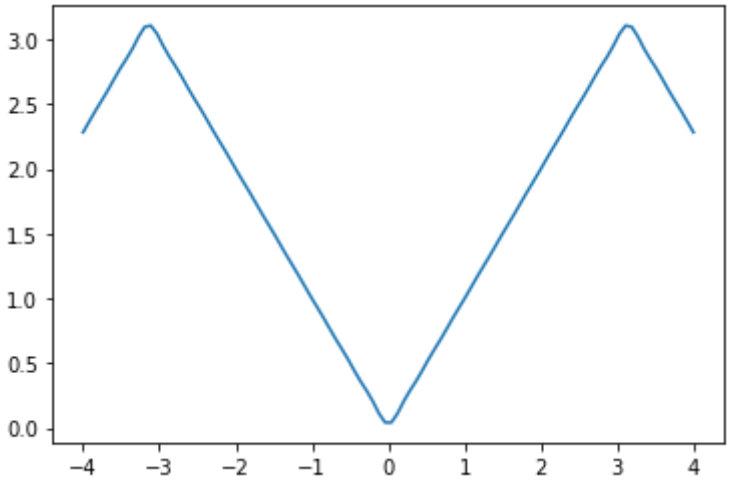
In [1]:
```
# La f være den 2pi-periodiske funksjonen slik at f(x)=|x|
# for x i intervallet [-pi,pi].
# Vi vil plotte Fourier-polynomet til f av grad 2N-1, hvor N=10.
```

In [2]:
```
from numpy import *
from matplotlib.pyplot import *
```

In [3]:
```
def S(x,n):
    k = array(range(n))
    a = cos((2*k+1)*x)/(2*k+1)**2
    return pi/2 - (4/pi)*sum(a)
```

In [4]:
```
N =10
t = linspace(-4,4,100)
y = zeros(len(t))
for i in range(len(t)):
    y[i] = S(t[i],N)
plot(t,y)
show()
```



In [ ]:

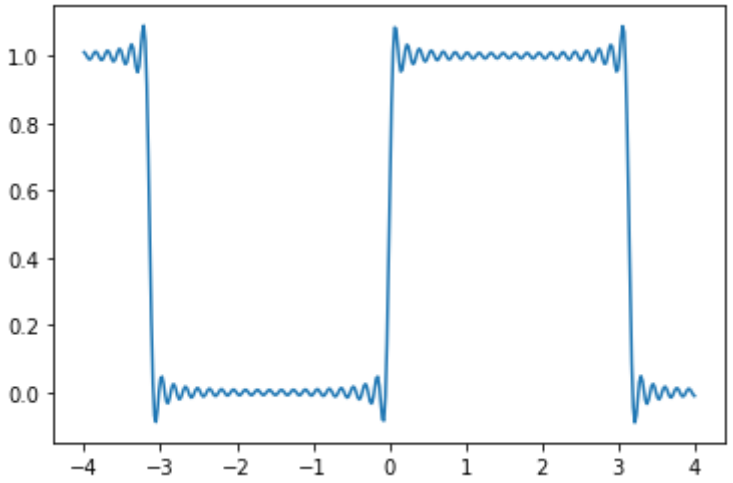
In [ ]:

In [1]:
```
# La f være den 2pi-periodiske funksjonen som er 0 på intervallet [pi,0]
# og 1 på intervallet (0,pi).
# Vi vil plotte Fourier-polynomet til f av grad 2N-1, hvor N=20.
```

In [2]:
```
from numpy import *
from matplotlib.pyplot import *
```

In [3]:
```
def S(x,n):
    k = array(range(n))
    a = sin((2*k+1)*x)/(2*k+1)
    return 0.5 + (2/pi)*sum(a)
```

In [4]:
```
N = 20
t = linspace(-4,4,400)
y = zeros(len(t))
for i in range(len(t)):
    y[i] = S(t[i],N)
plot(t,y)
show()
```



In [ ]:
```
```