

## 3.8

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[ ]: # %load 3.8
import numpy;
import matplotlib.pyplot as plt;

iterations=100;
w=numpy.zeros(10);
alpha=1;
wt=w.transpose();
g=numpy.zeros(iterations);
ite=numpy.zeros(iterations);
for i in range(iterations):
    if i==0:
        w=10*numpy.ones(iterations)
        wt=w.transpose();
        g[i]=wt@w;
        w=w-alpha*2*w;
        wt=w.transpose();
        g[i]=wt@w;

    for i in range(iterations):
        ite[i]=i;

plt.plot(ite, g)
plt.show()
```

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