# Test 1: 2 points

power\_in\_hypo\_test\_for\_mean(119.999, 120, 36, 0.05, 12, pop=True, tail=4)

power\_in\_hypo\_test\_for\_mean(119.999, 120, 36, 0.05, 12, pop=False, tail=4)

# Test 2: 6 points in total (2 points each)

print(power\_in\_hypo\_test\_for\_mean(119.999, 120, 36, 0.05, 12, pop=False, tail=-1))

print(power\_in\_hypo\_test\_for\_mean(120.001, 120, 36, 0.05, 12, pop=False, tail=1))

print(power\_in\_hypo\_test\_for\_mean(16.5, 16, 30, 0.05, 0.8, pop=False, tail=0))

# Test 3: 6 points in total (2 points each)

import numpy as np

import matplotlib.pyplot as plt

%matplotlib inline

# plot power curve for lower-tailed test with population sd

x = np.arange(110, 120, 0.02)

plt.plot(x, power\_in\_hypo\_test\_for\_mean(x, 120, 36, 0.05, 12, pop=True, tail=-1), 'r--')

plt.show()

# plot power curve for upper-tailed test with population sd

x = np.arange(120, 130, 0.02)

plt.plot(x, power\_in\_hypo\_test\_for\_mean(x, 120, 36, 0.05, 12, pop=True, tail=1), 'r--')

plt.show()

# plot power curve for two-tailed test with population sd

x = np.arange(15, 17, 0.02)

plt.plot(x, power\_in\_hypo\_test\_for\_mean(x, 16, 30, 0.05, 0.8, pop=True, tail=0), 'r--')

plt.show()

## Expected output

tail must be -1 for lower-tail test, 0 for two-tailed test, or 1 for upper-tail test (your error message does not have to be the same)

tail must be -1 for lower-tail test, 0 for two-tailed test, or 1 for upper-tail test (your error message does not have to be the same)

0.0500483096257

0.0500483096257

0.910637011996





