x = np.linspace(5e3, 15e3, 500)

y\_mpmath = pRW\_mpmath\_vec(x, 0.1, 1)

y\_likun = pRW(x, 0.1, 1)

y\_muyang = pRW\_transformed\_cpp(x, 0.1, 1)

y\_muyang2 = pRW\_transformed\_2piece\_cpp(x, 0.1, 1)

fig, ax = plt.subplots()

ax.plot(x, y\_mpmath, label='y\_mpmath')

ax.plot(x, y\_likun, label='y\_likun')

ax.plot(x, y\_muyang, label='y\_muyang')

ax.plot(x, y\_muyang2, label='y\_muyang2')

plt.legend()

plt.show()

A graph with numbers and lines

Description automatically generated

x = np.linspace(1e4, 5e4, 500)

y\_mpmath = pRW\_mpmath\_vec(x, 0.1, 1)

y\_likun = pRW(x, 0.1, 1)

y\_muyang = pRW\_transformed\_cpp(x, 0.1, 1)

y\_muyang2 = pRW\_transformed\_2piece\_cpp(x, 0.1, 1)

fig, ax = plt.subplots()

ax.plot(x, y\_mpmath, label='y\_mpmath')

ax.plot(x, y\_likun, label='y\_likun')

ax.plot(x, y\_muyang, label='y\_muyang')

ax.plot(x, y\_muyang2, label='y\_muyang2')

plt.legend()

plt.show()

A graph with numbers and lines

Description automatically generated

But the transformed is 10 times slower

A screenshot of a computer

Description automatically generated