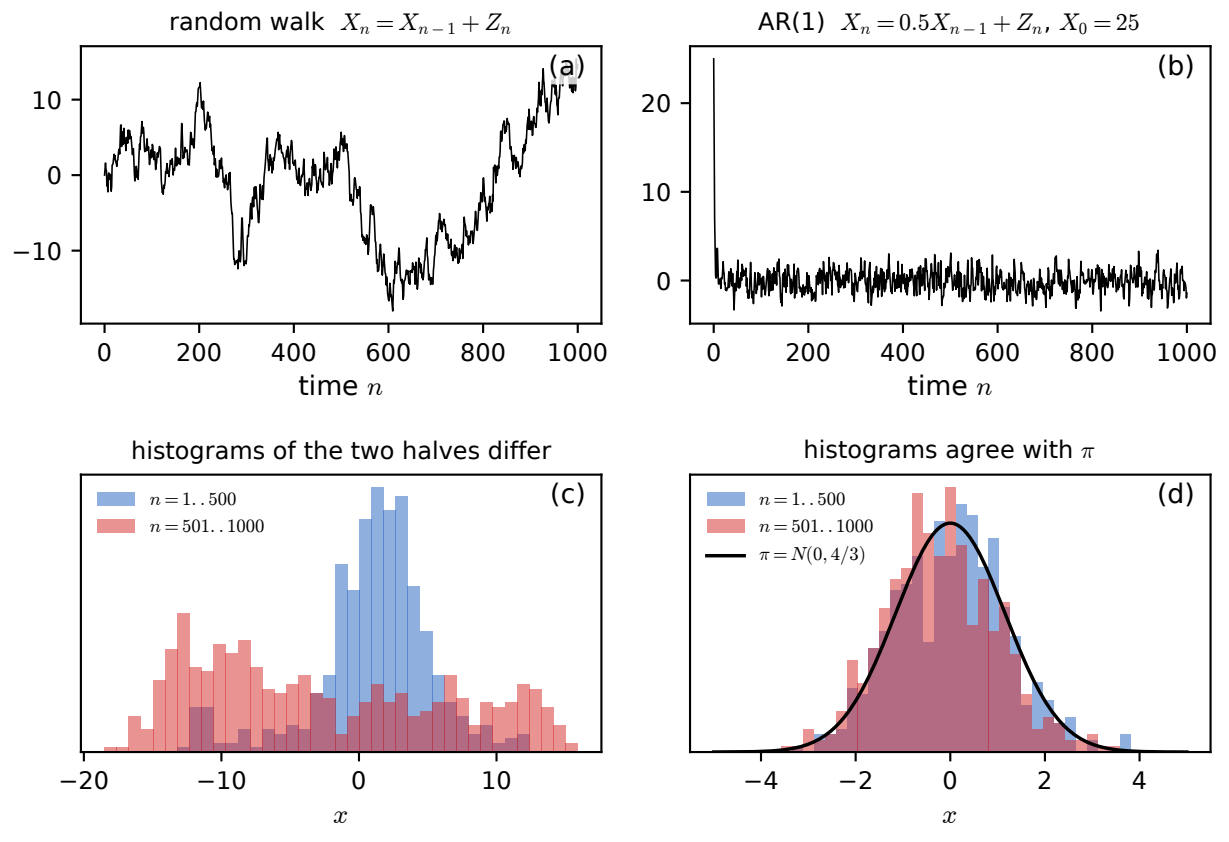

random walk $X_n = X_{n-1} + Z_n$
(a)
10
0
−10
0
200
400
600
800
1000
time n
AR(1) $X_n = 0.5X_{n-1} + Z_n$, $X_0 = 25$
(b)
20
10
0
0
200
400
600
800
1000
time n
histograms of the two halves differ
(c)
$n = 1..500$
$n = 501..1000$
−20
−10
0
10
x
histograms agree with π
(d)
$n = 1..500$
$n = 501..1000$
$\pi = N(0, 4/3)$
−4
−2
0
2
4
x