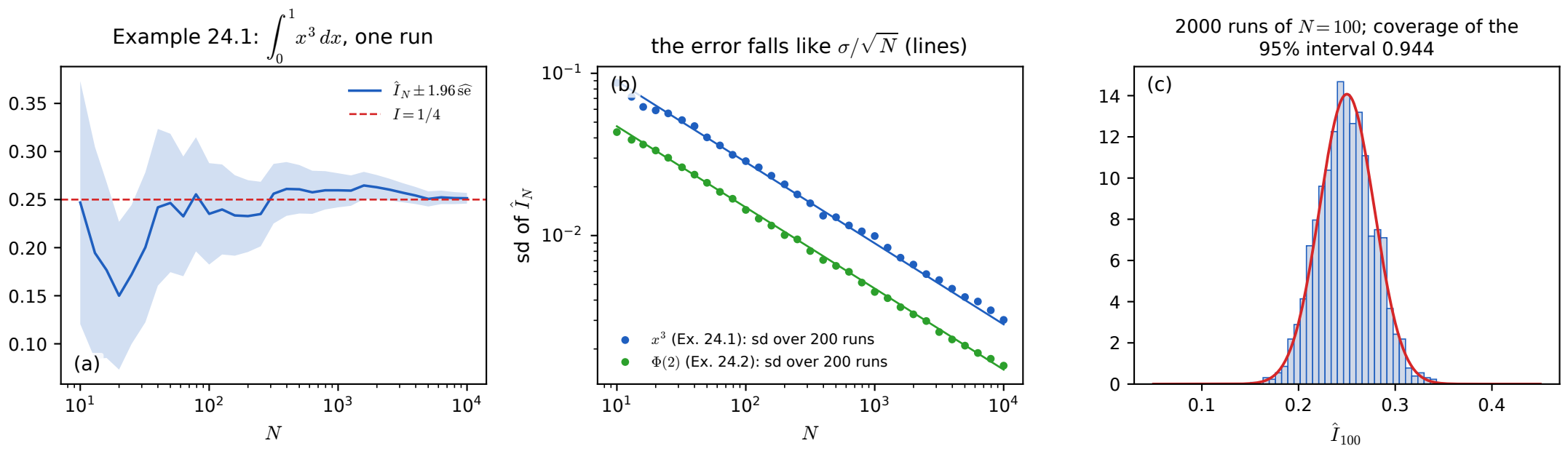

Example 24.1: $\int_0^1 x^3\,dx$, one run
$\hat{I}_N \pm 1.96\,\widehat{\mathrm{se}}$
$I = 1/4$
(a)
N
the error falls like $\sigma/\sqrt{N}$ (lines)
(b)
sd of $\hat{I}_N$
x^3 (Ex. 24.1): sd over 200 runs
$\Phi(2)$ (Ex. 24.2): sd over 200 runs
N
2000 runs of $N = 100$; coverage of the 95% interval 0.944
(c)
$\hat{I}_{100}$