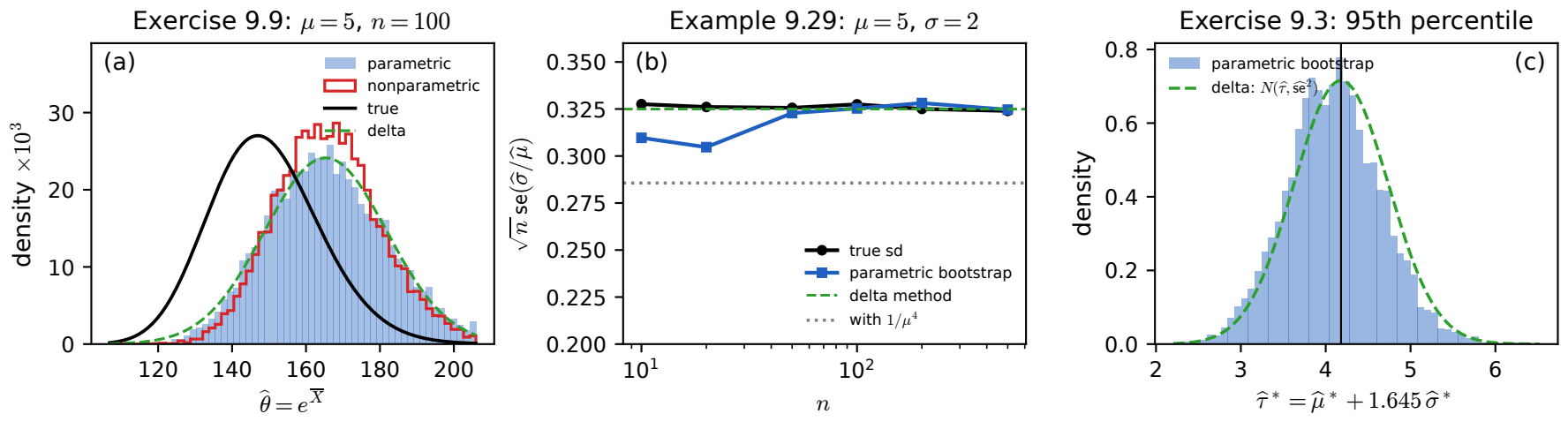

Exercise 9.9: $\mu = 5$, $n = 100$
(a)
parametric
nonparametric
true
delta
density $\times 10^3$
30
20
10
0
120
140
160
180
200
$\widehat{\theta} = e^{\overline{X}}$
Example 9.29: $\mu = 5$, $\sigma = 2$
(b)
0.350
0.325
0.300
0.275
0.250
0.225
0.200
$\sqrt{n}\,\mathrm{se}(\widehat{\sigma}/\widehat{\mu})$
true sd
parametric bootstrap
delta method
with $1/\mu^4$
10^1
10^2
n
Exercise 9.3: 95th percentile
(c)
parametric bootstrap
delta: $N(\widehat{\tau}, \widehat{\mathrm{se}}^2)$
density
0.8
0.6
0.4
0.2
0.0
2
3
4
5
6
$\widehat{\tau}^* = \widehat{\mu}^* + 1.645\,\widehat{\sigma}^*$