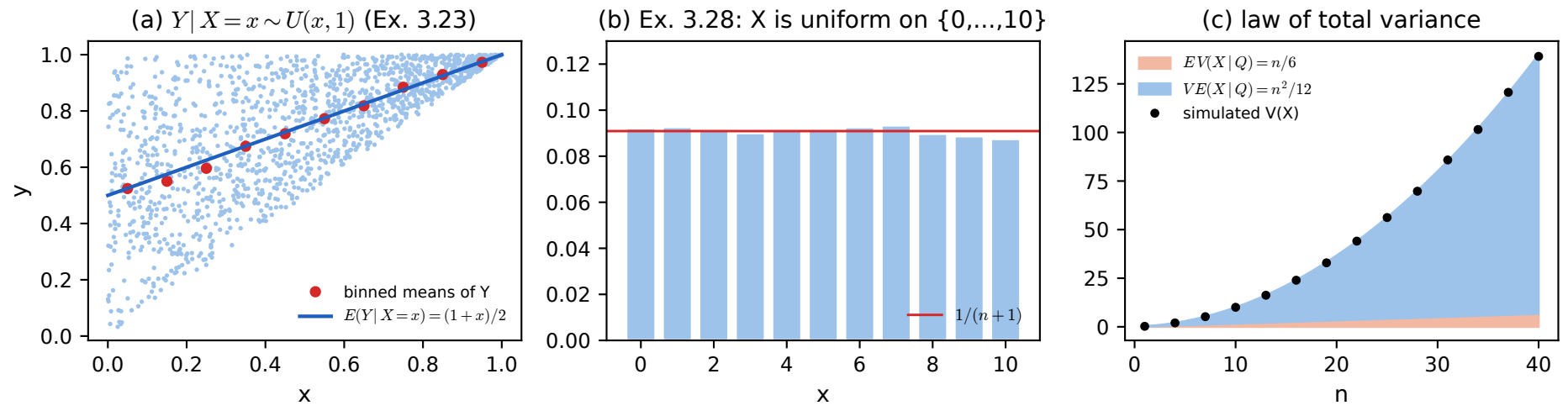

(a) $Y|\,X=x\sim U(x,1)$ (Ex. 3.23)
binned means of Y
$E(Y|\,X=x)=(1+x)/2$
x
y
(b) Ex. 3.28: X is uniform on {0,...,10}
$1/(n+1)$
x
(c) law of total variance
$EV(X|\,Q)=n/6$
$VE(X|\,Q)=n^2/12$
simulated V(X)
n