

006-Sensitivity Analysis of One Paramter

Central Limit Theorem

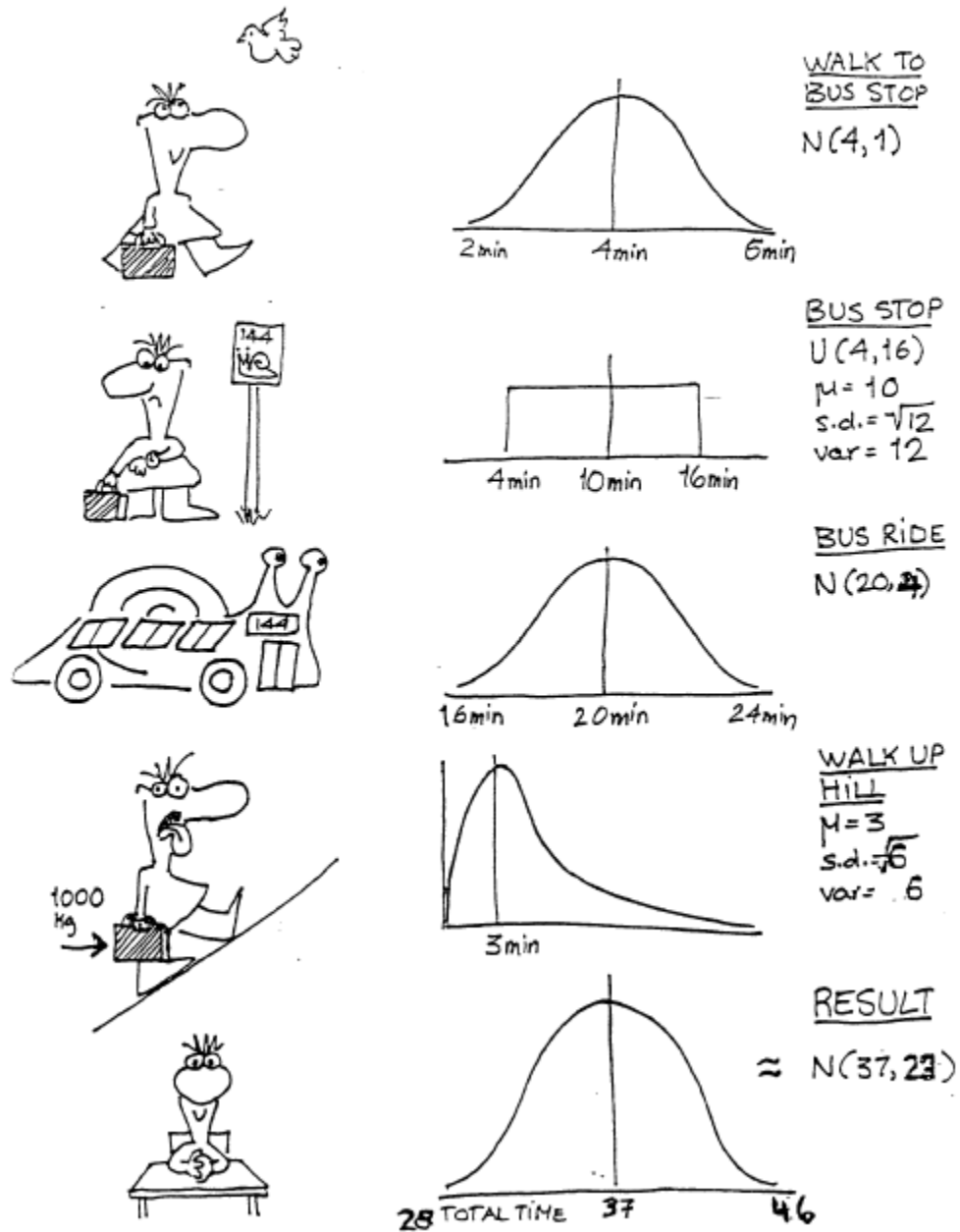
May 26, 2015

Abstract

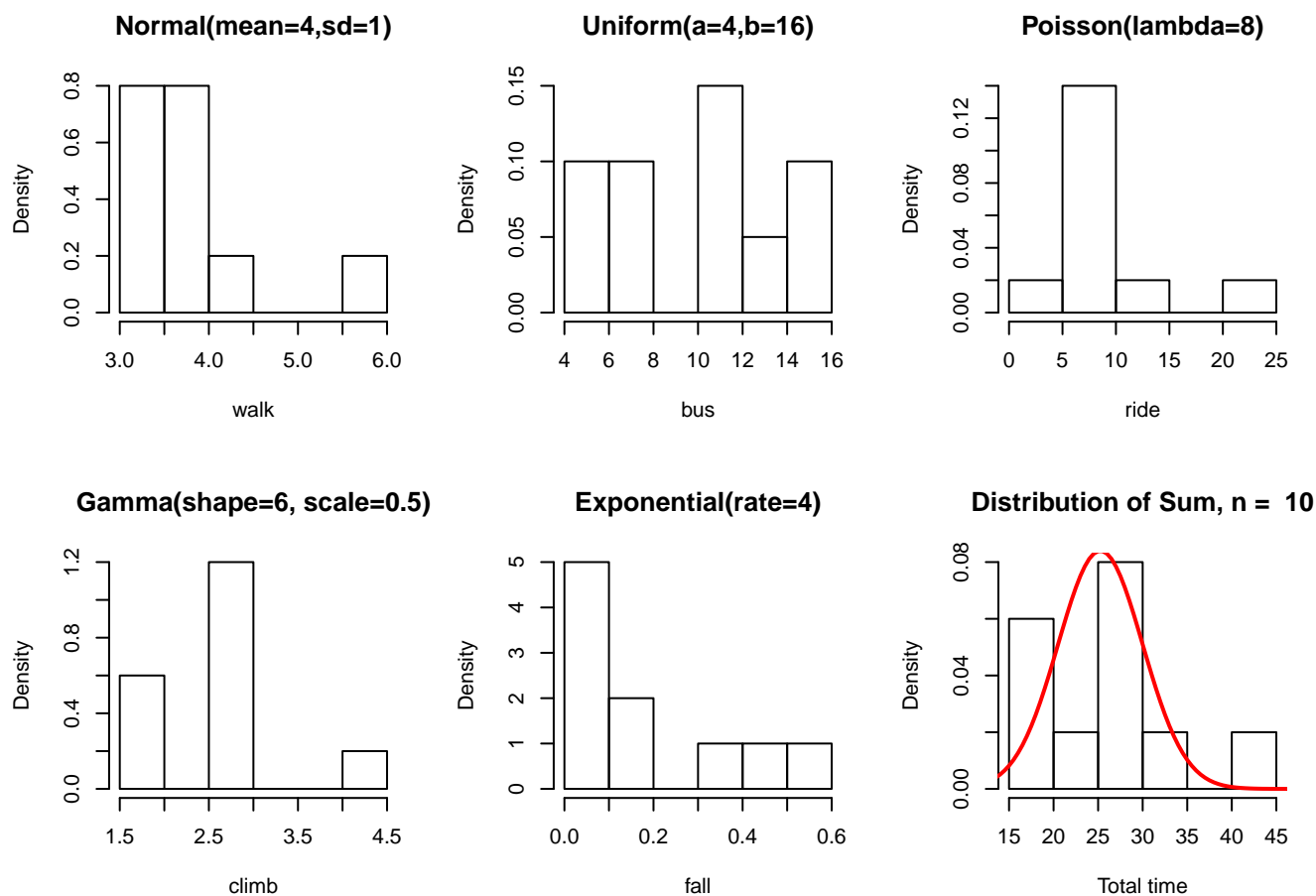
Often in statistics, we are required to perform sensitivity analyses to see the effect of parameters on inference. Here I provide a simple illustration of performing such a task in an efficient and reproducible way using the function `knitr::knit_expand`. We use the demonstration of the Central Limit Theorem (CLT) in action as an example.

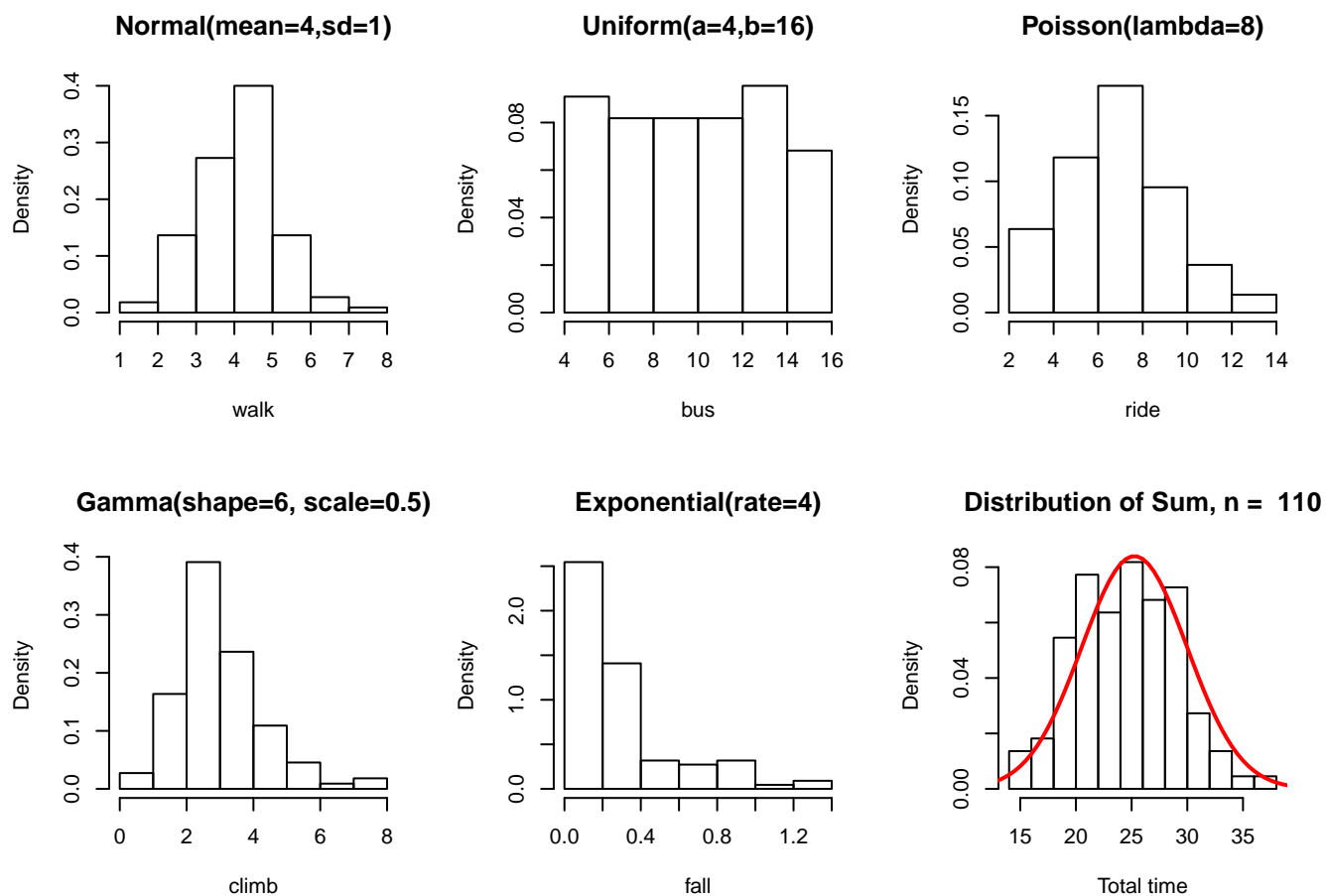
1 Lawrence Joseph's Trip to Purvis Hall

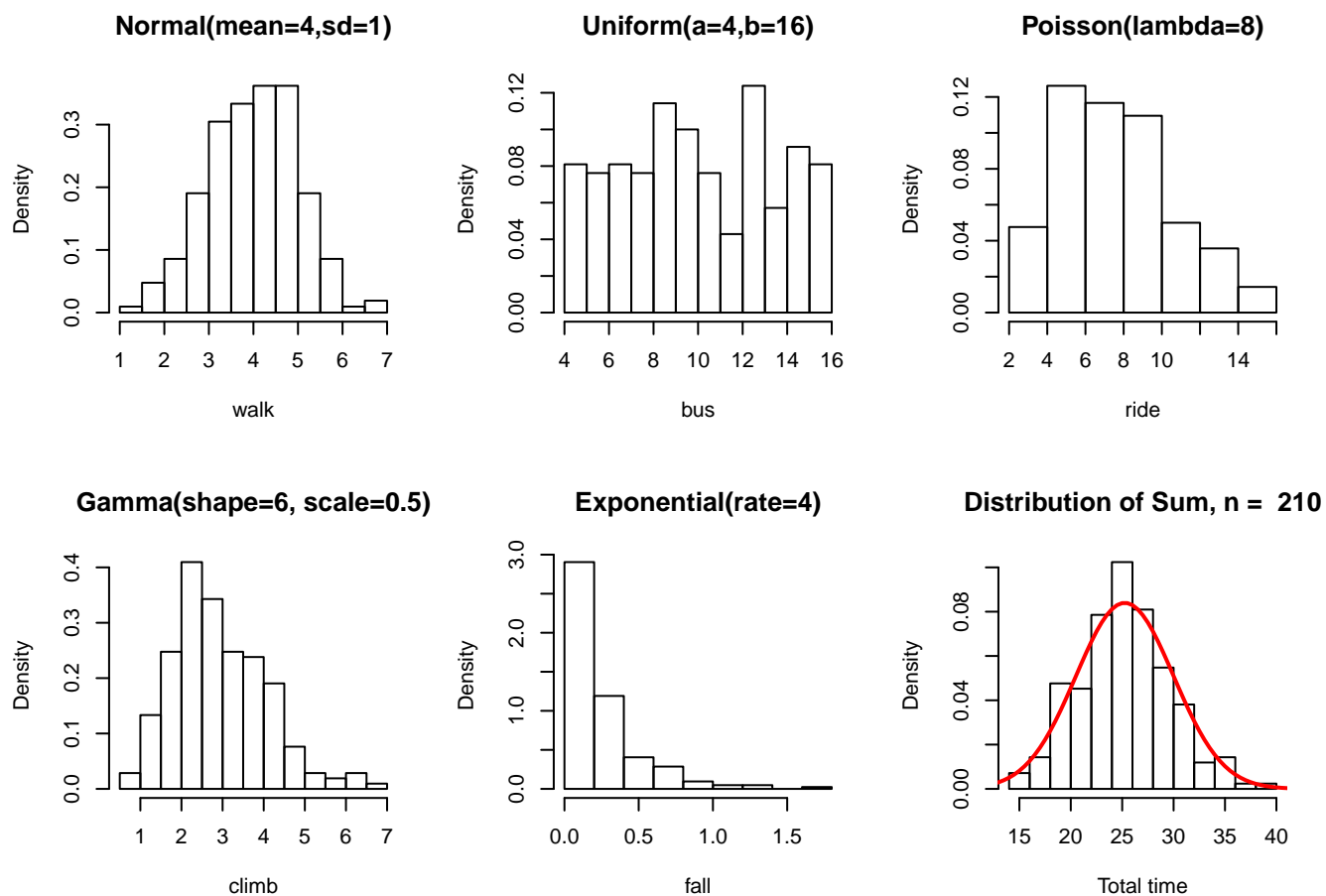
CENTRAL LIMIT THEOREM *IN ACTION*

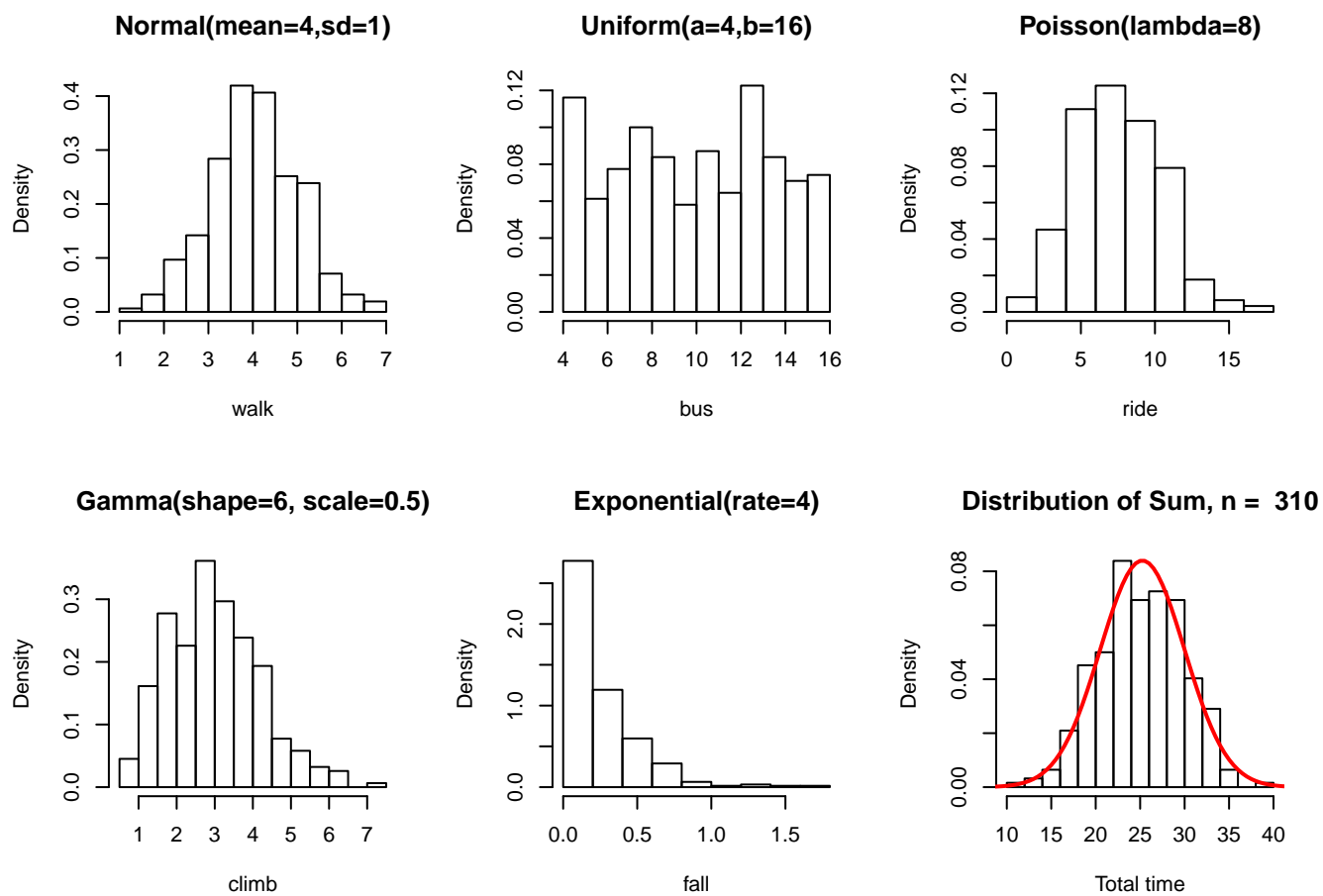


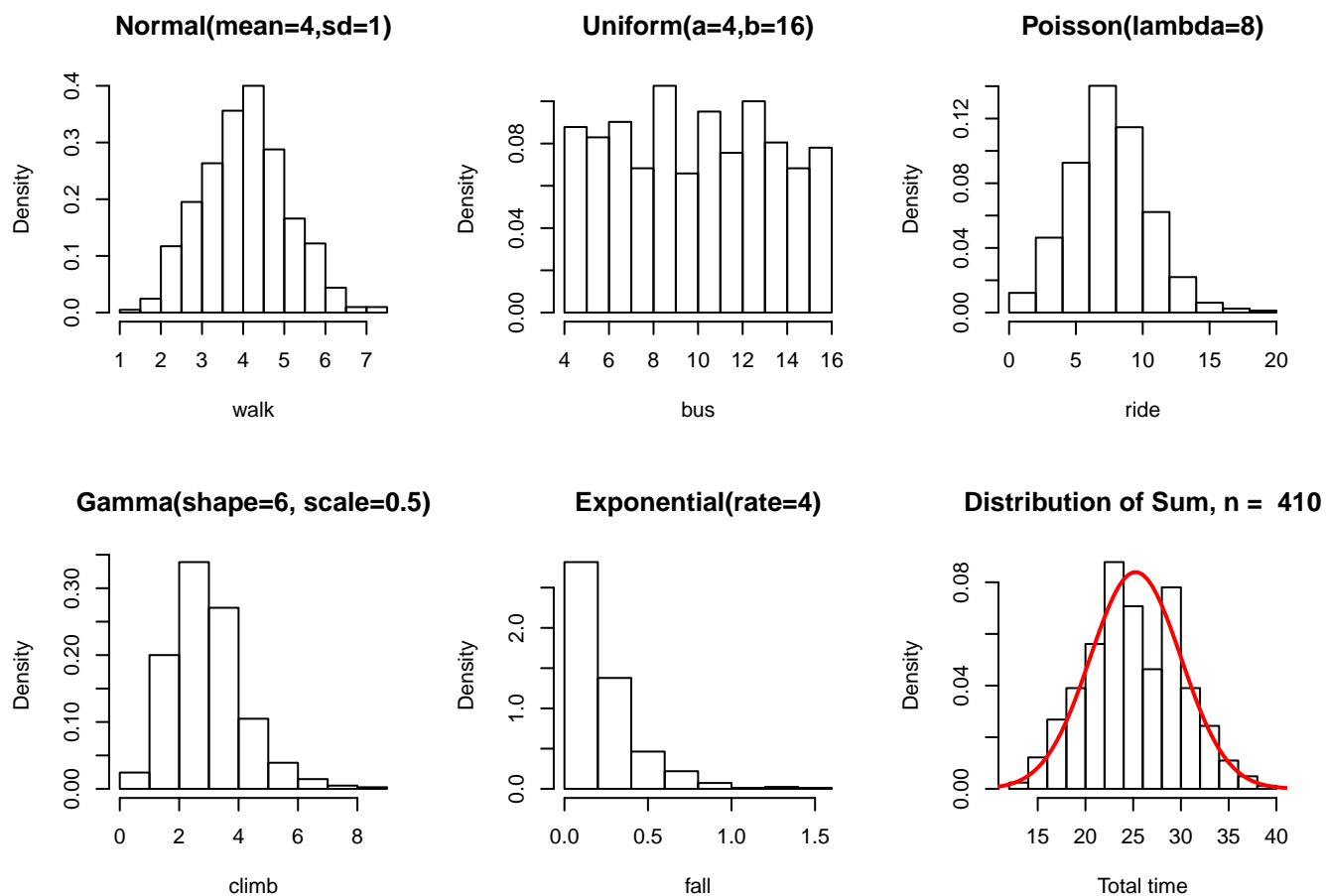
2 Proof of CLT in Action with R and knitr::knit_expand

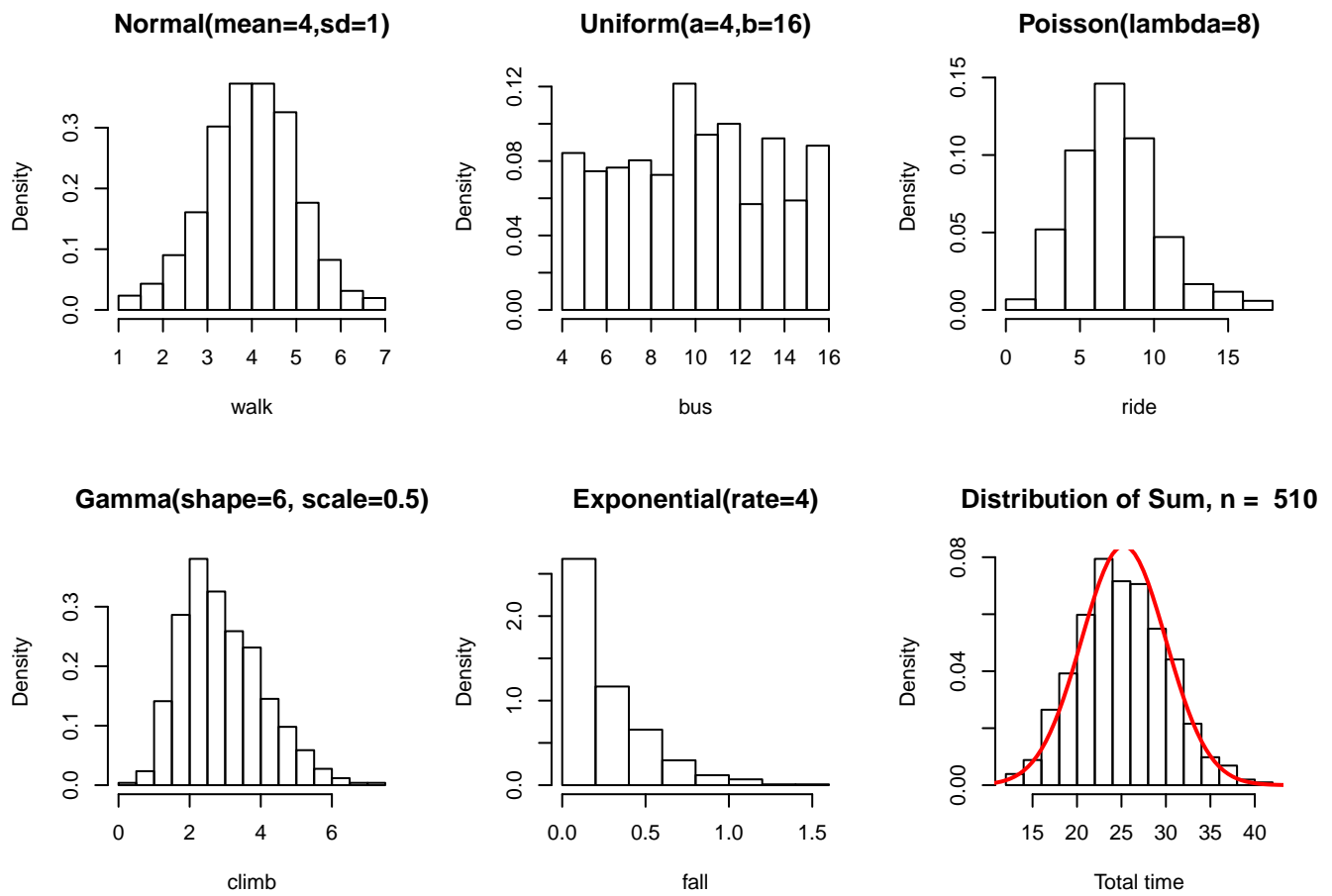
2.1 $n = 10$ Figure 1: CLT in Action with $n = 10$

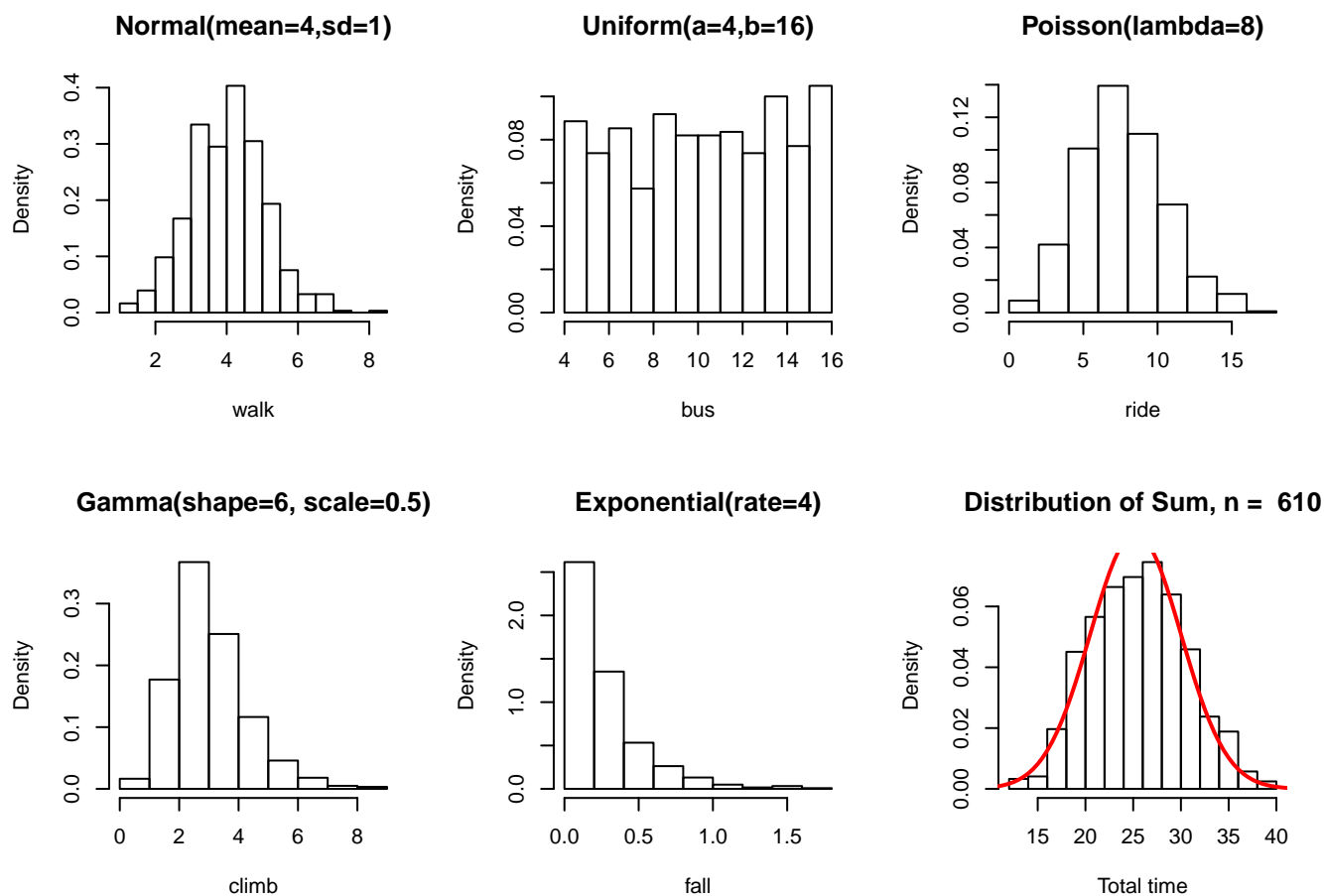
2.2 $n = 110$ Figure 2: CLT in Action with $n = 110$

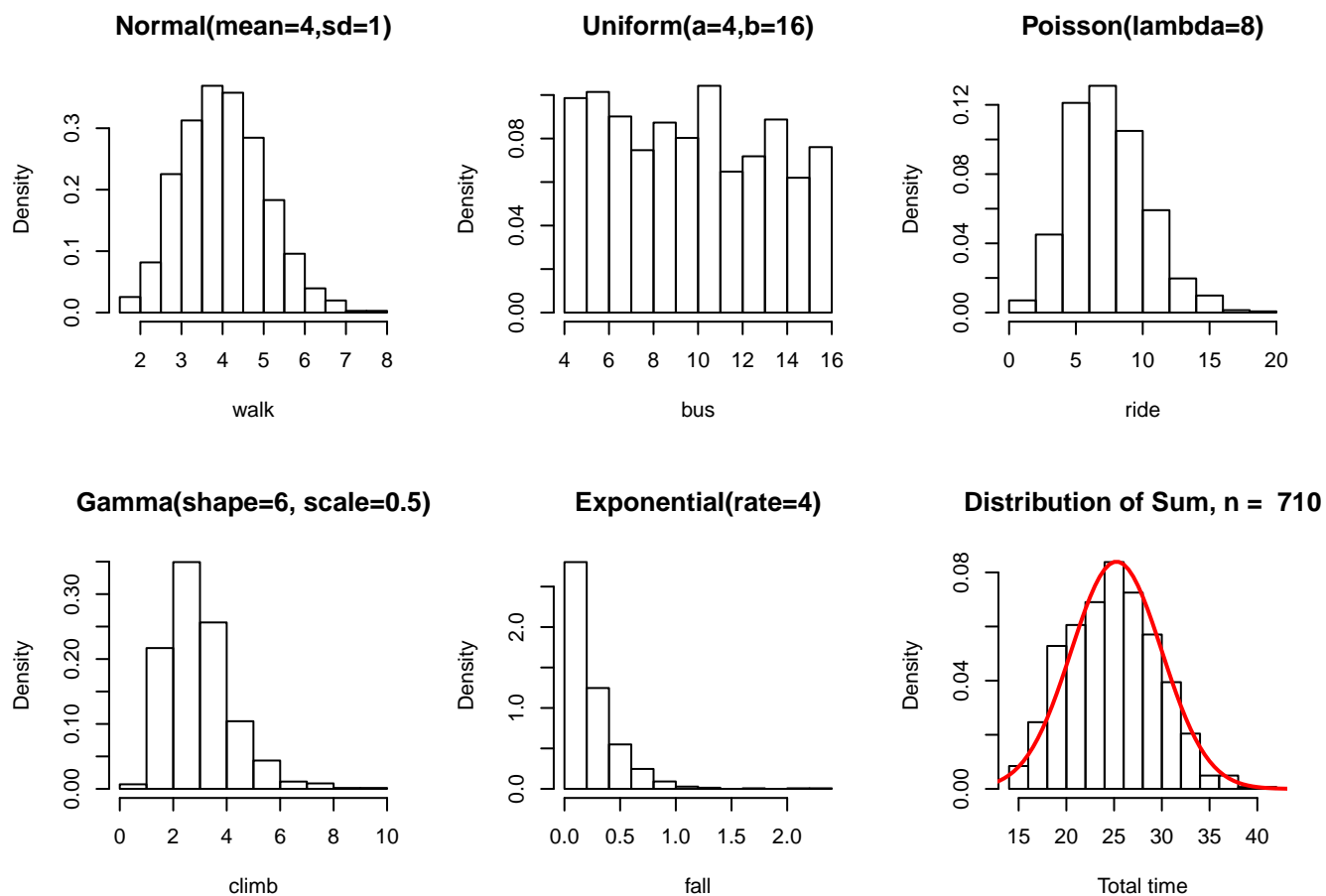
2.3 $n = 210$ Figure 3: CLT in Action with $n = 210$

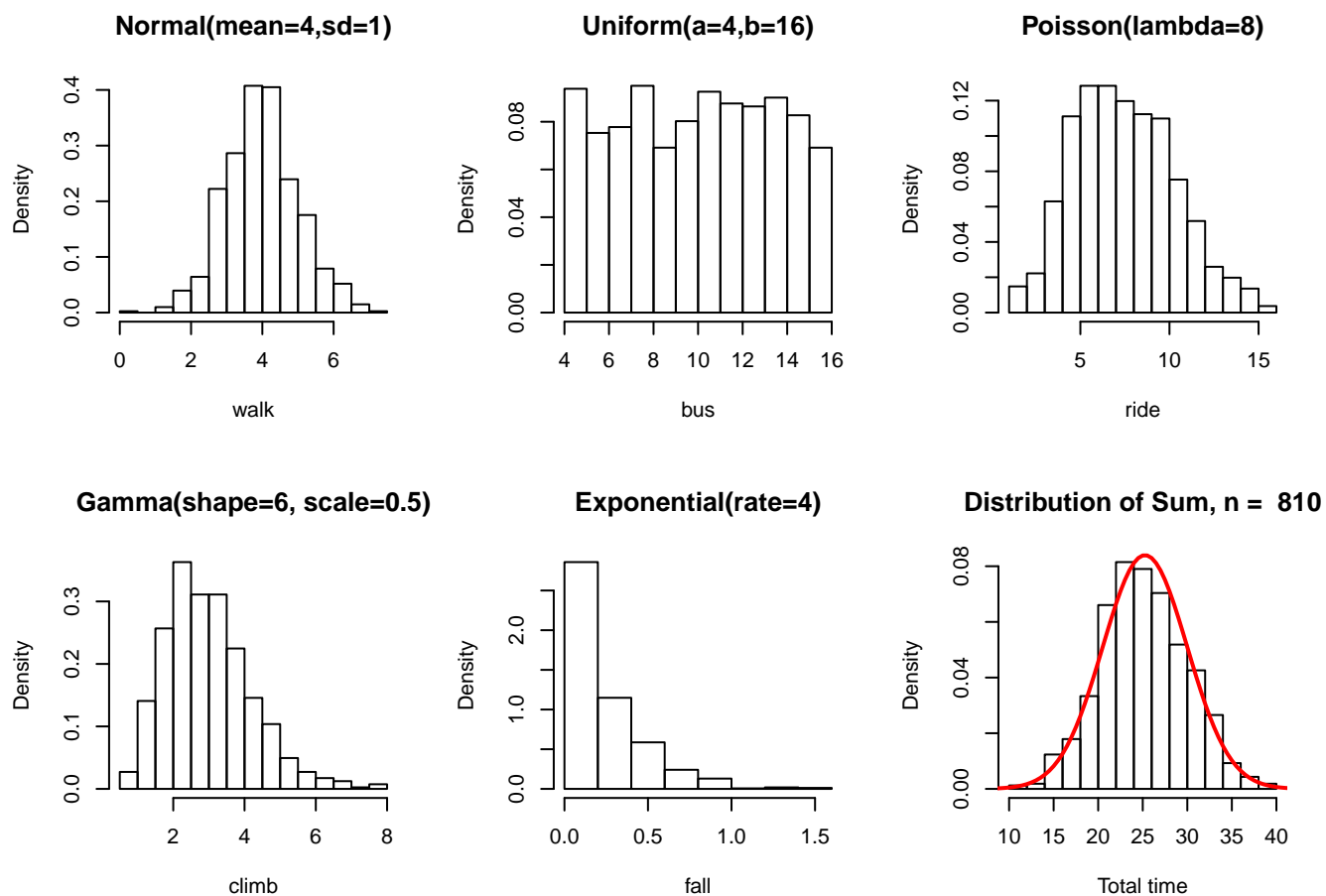
2.4 $n = 310$ Figure 4: CLT in Action with $n = 310$

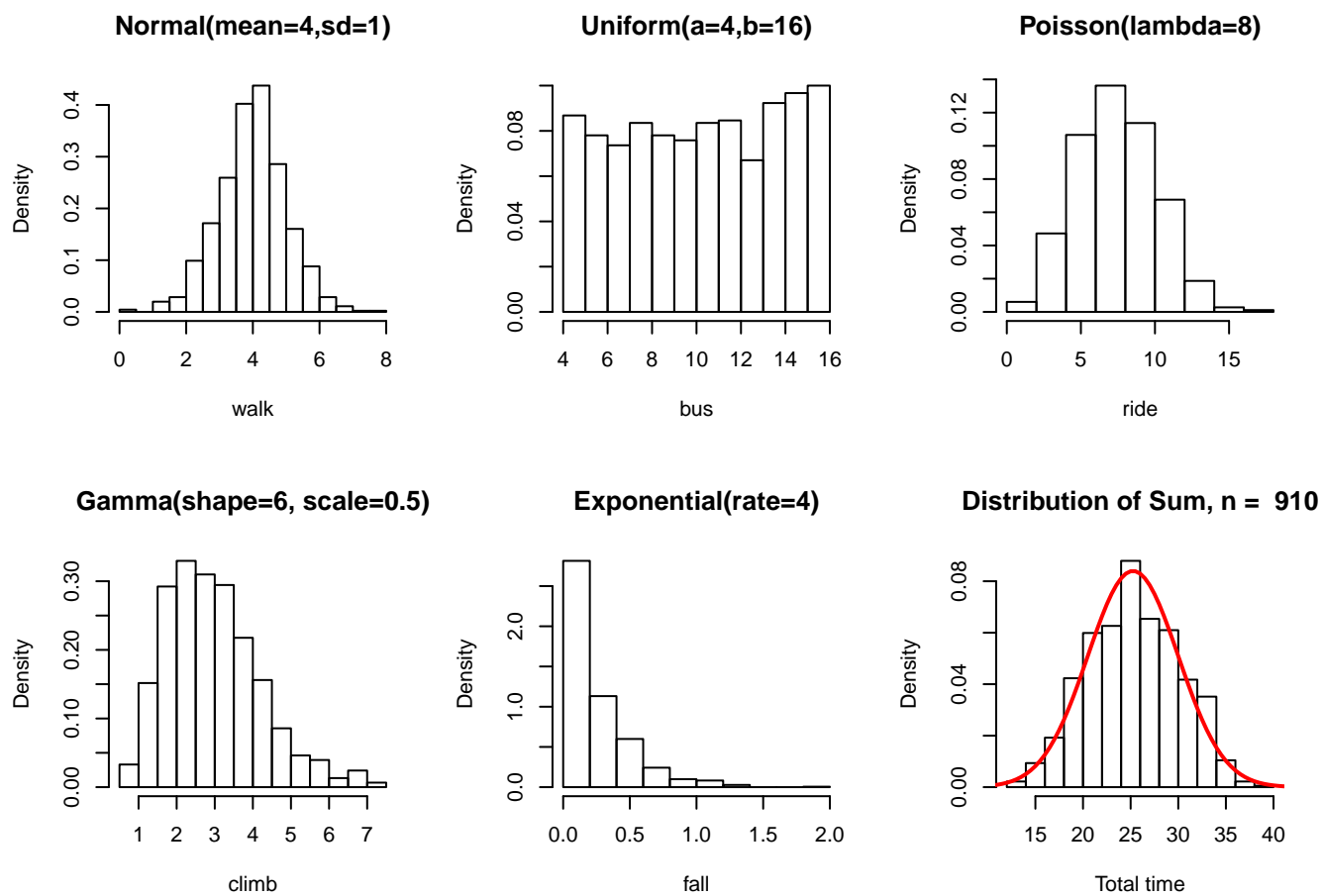
2.5 $n = 410$ Figure 5: CLT in Action with $n = 410$

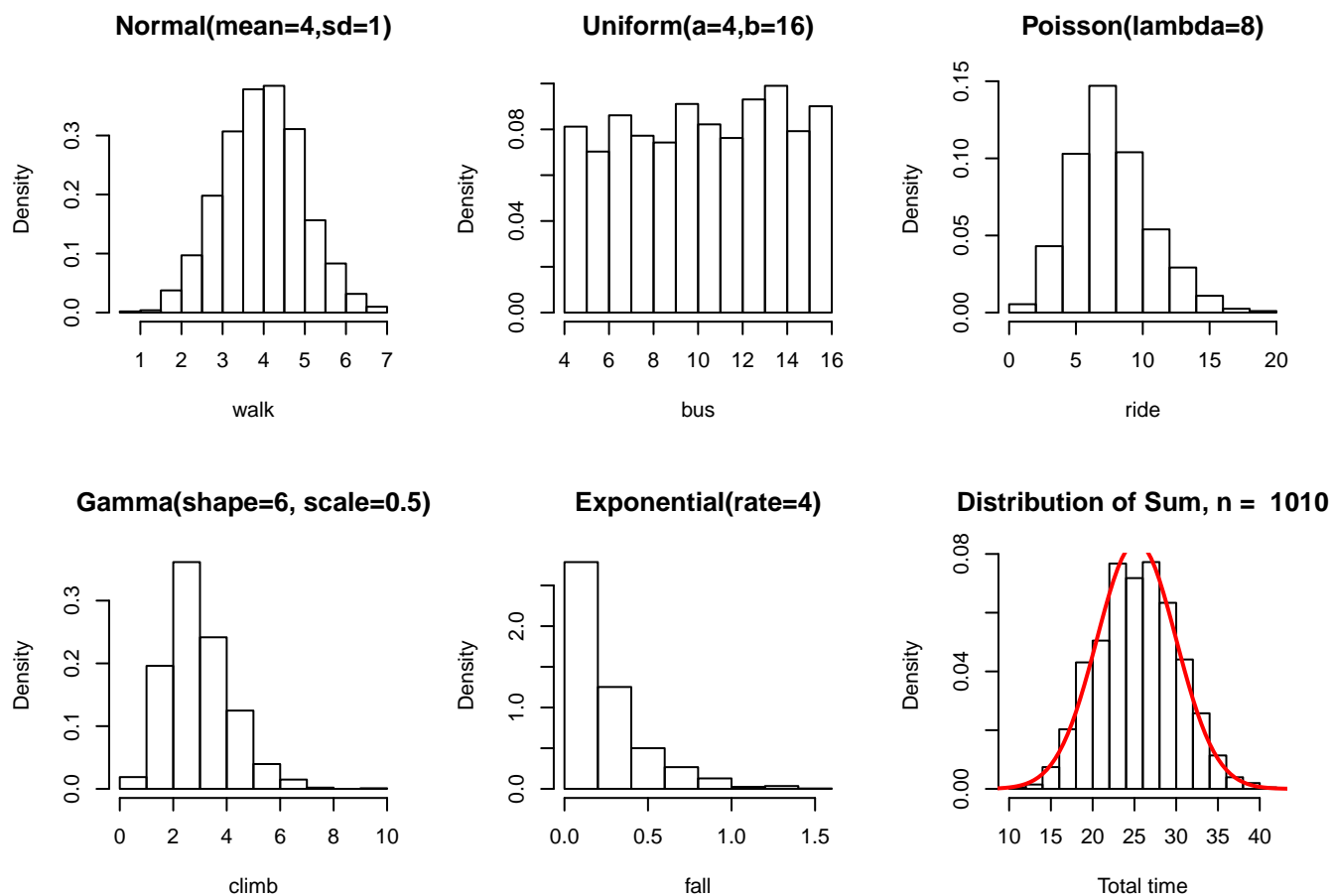
2.6 $n = 510$ Figure 6: CLT in Action with $n = 510$

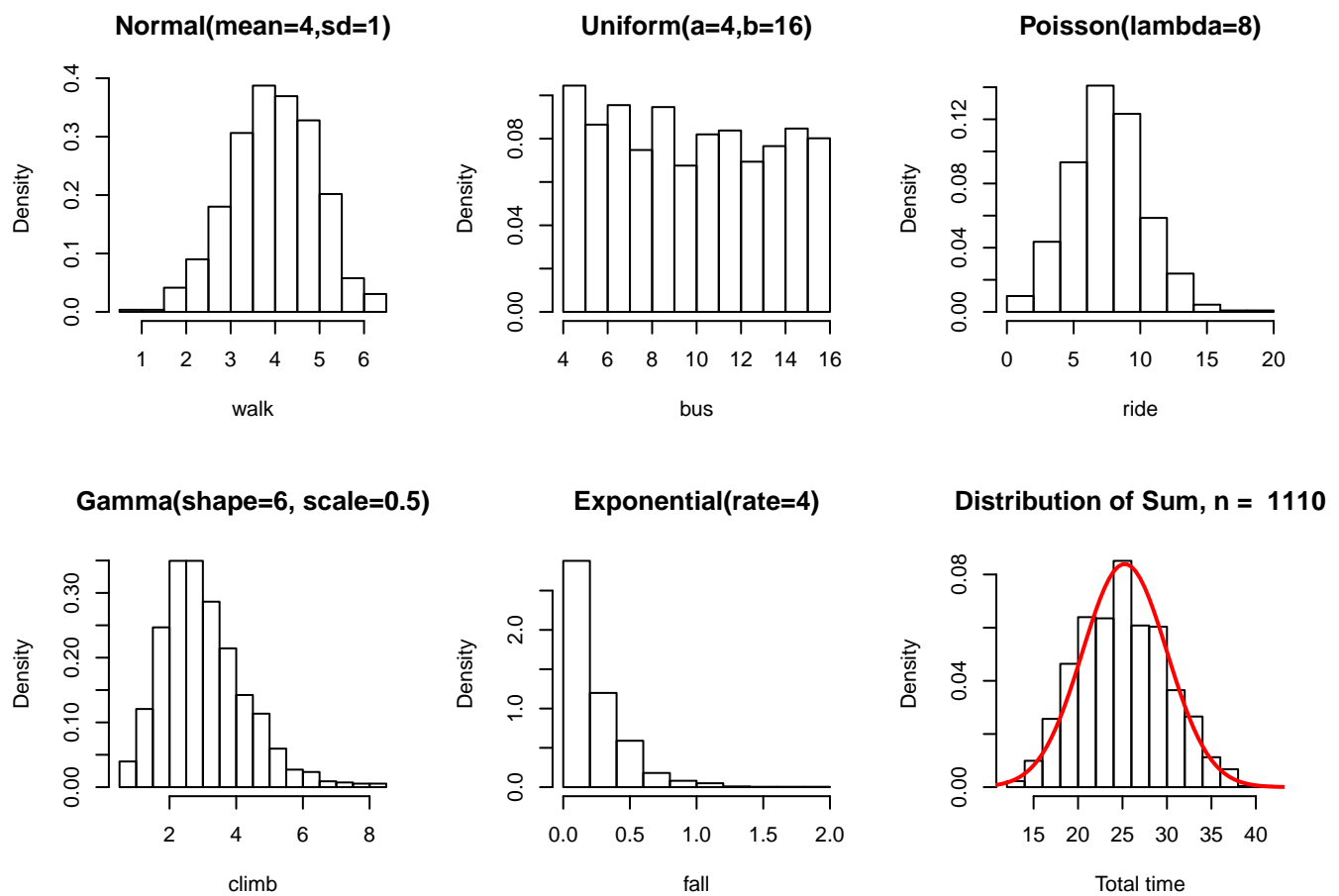
2.7 $n = 610$ Figure 7: CLT in Action with $n = 610$

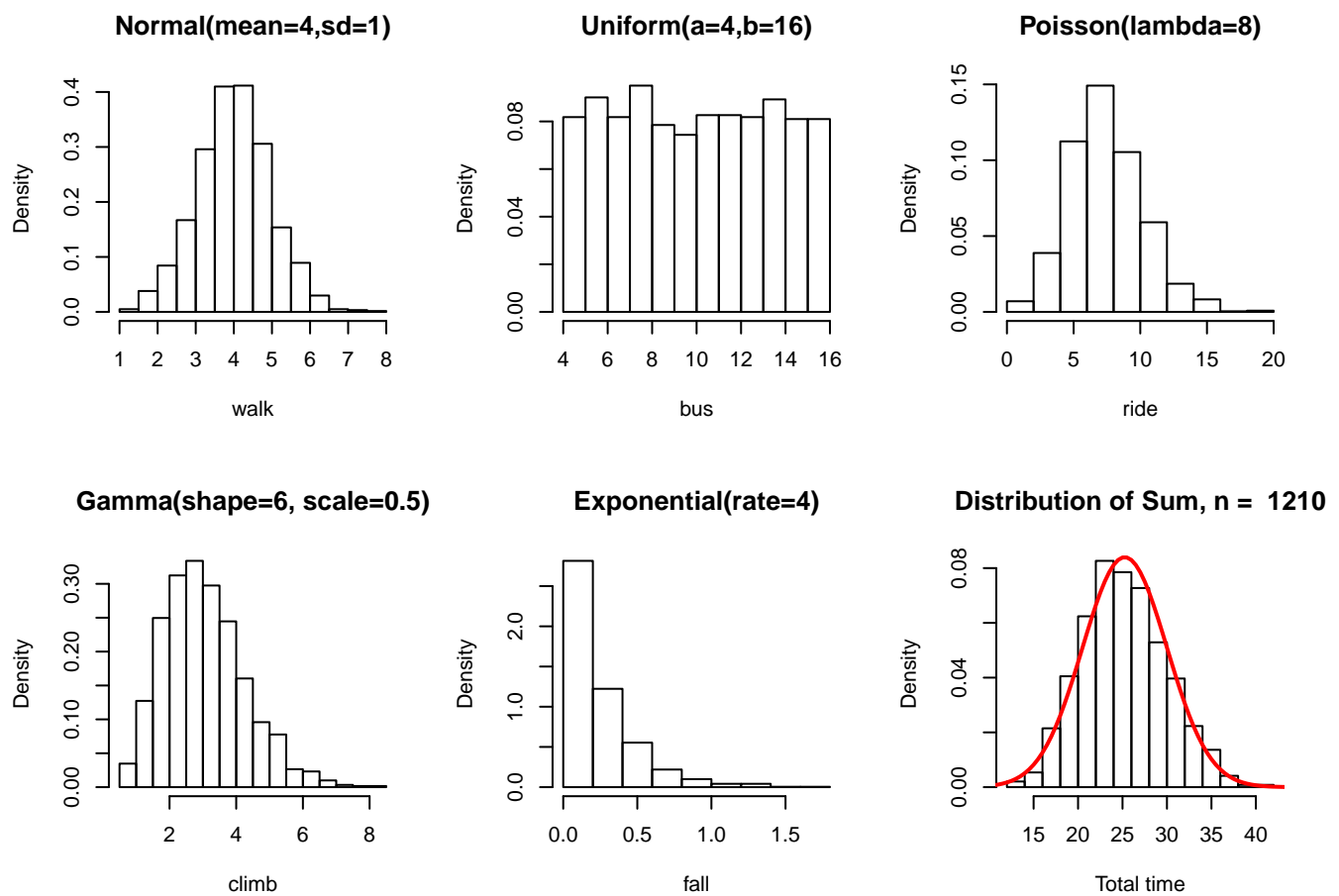
2.8 $n = 710$ Figure 8: CLT in Action with $n = 710$

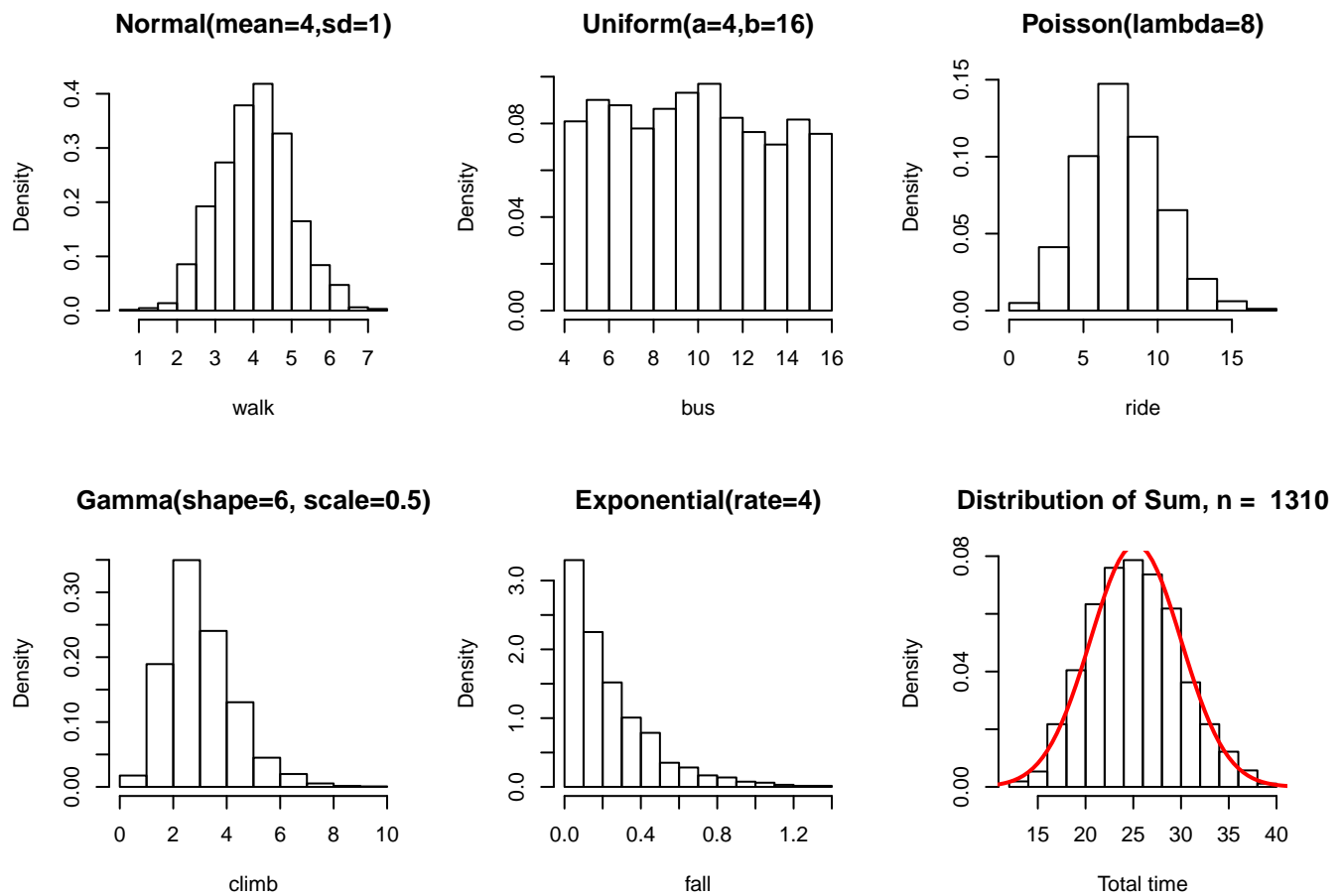
2.9 $n = 810$ Figure 9: CLT in Action with $n = 810$

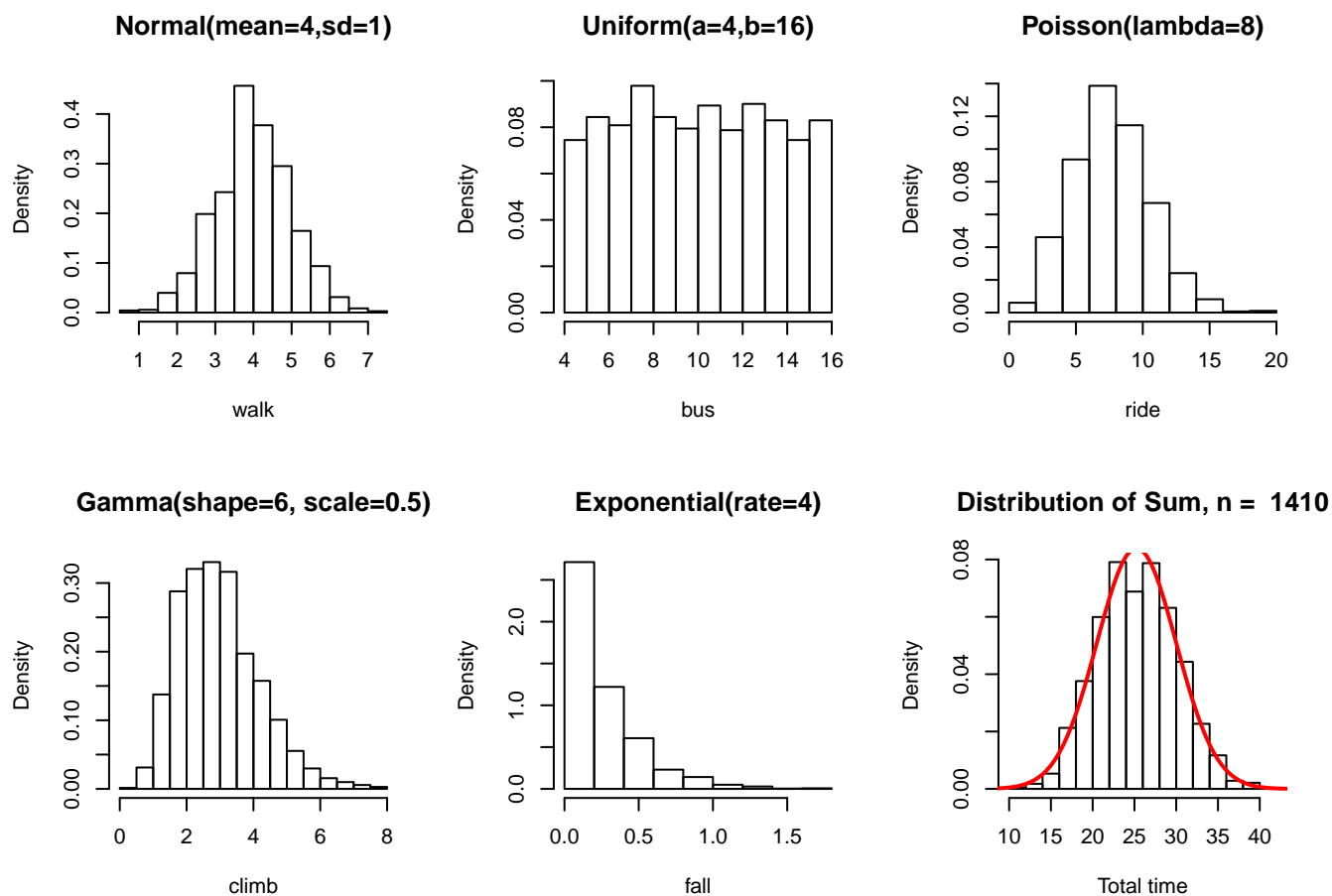
2.10 $n = 910$ Figure 10: CLT in Action with $n = 910$

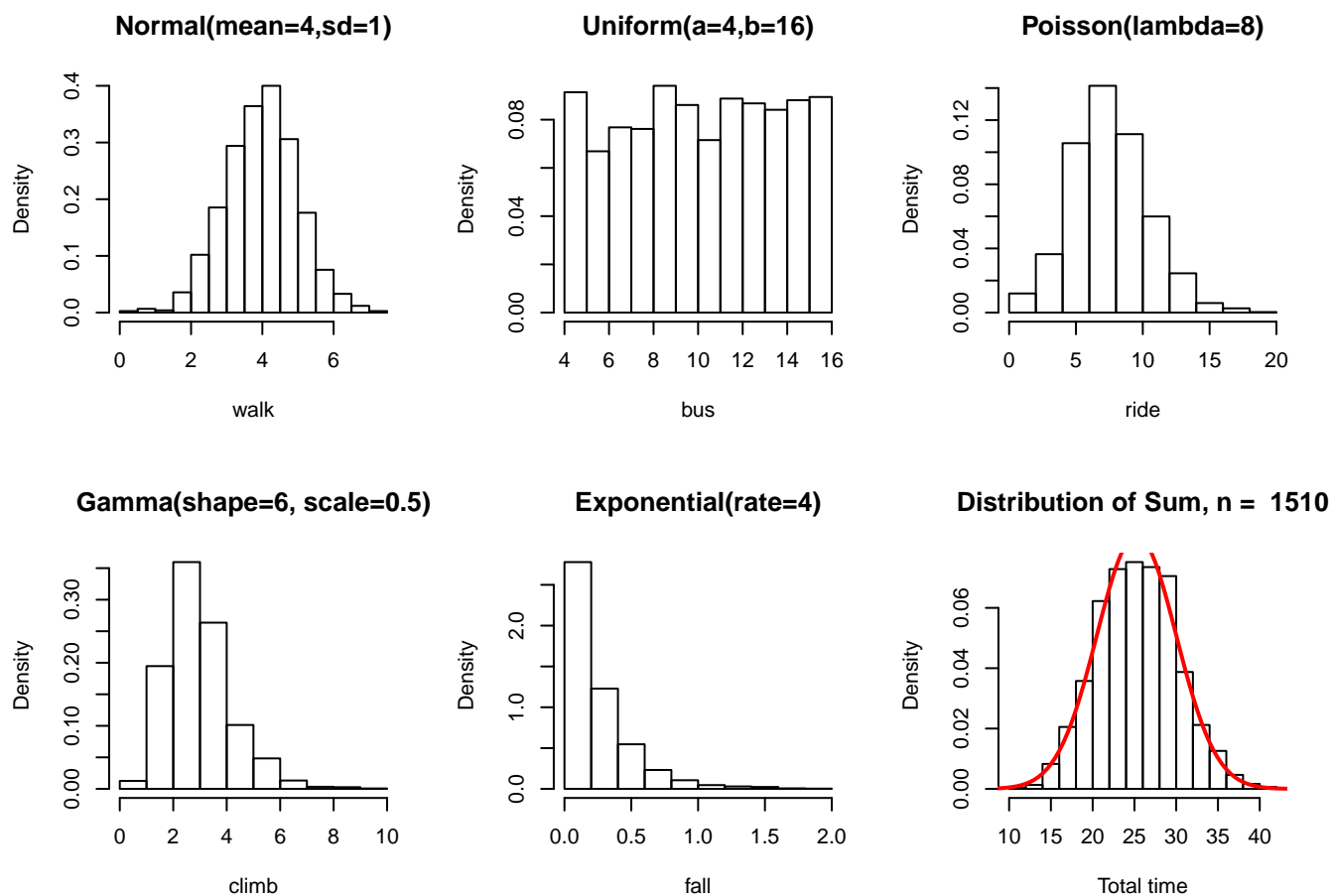
2.11 $n = 1010$ Figure 11: CLT in Action with $n = 1010$

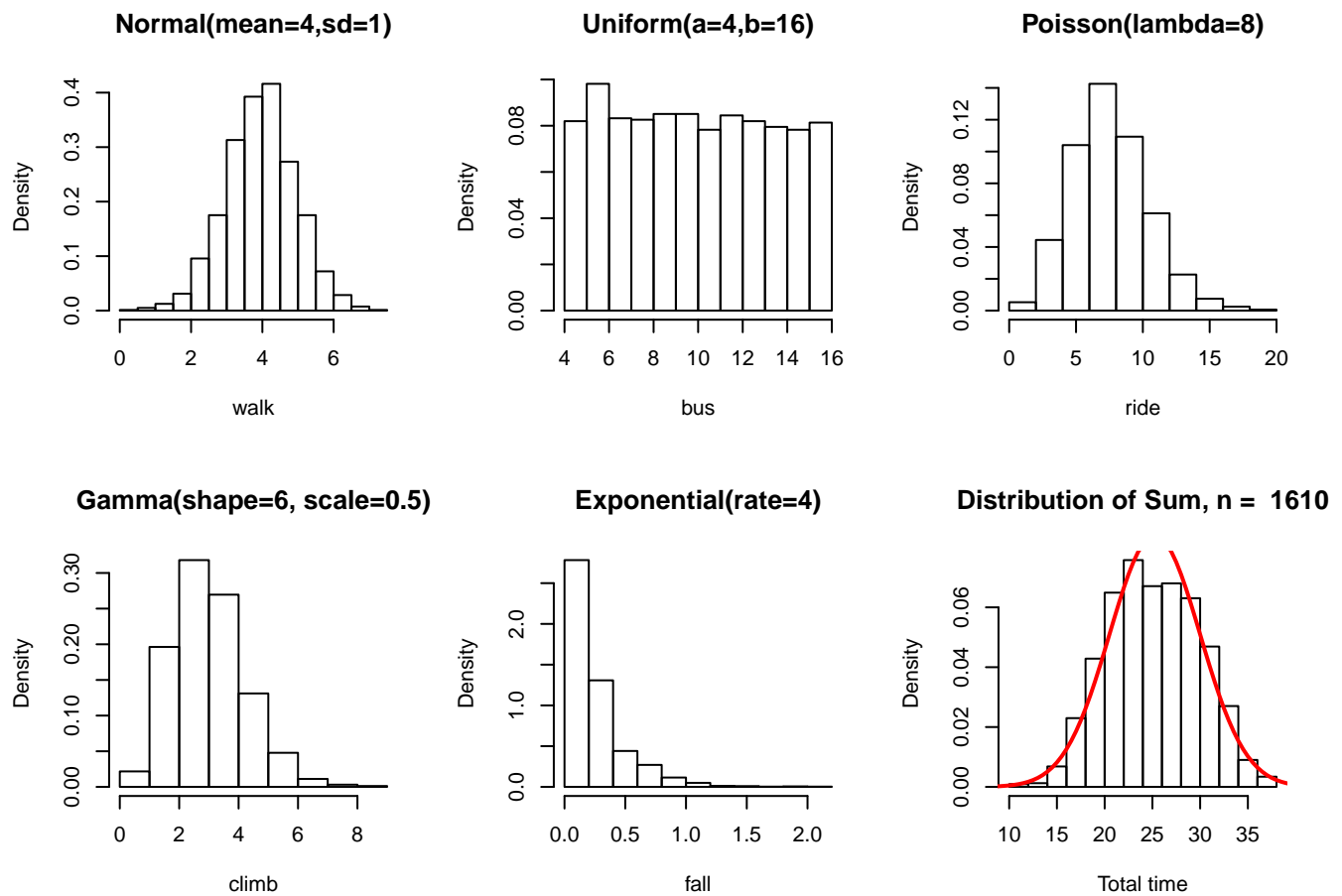
2.12 $n = 1110$ Figure 12: CLT in Action with $n = 1110$

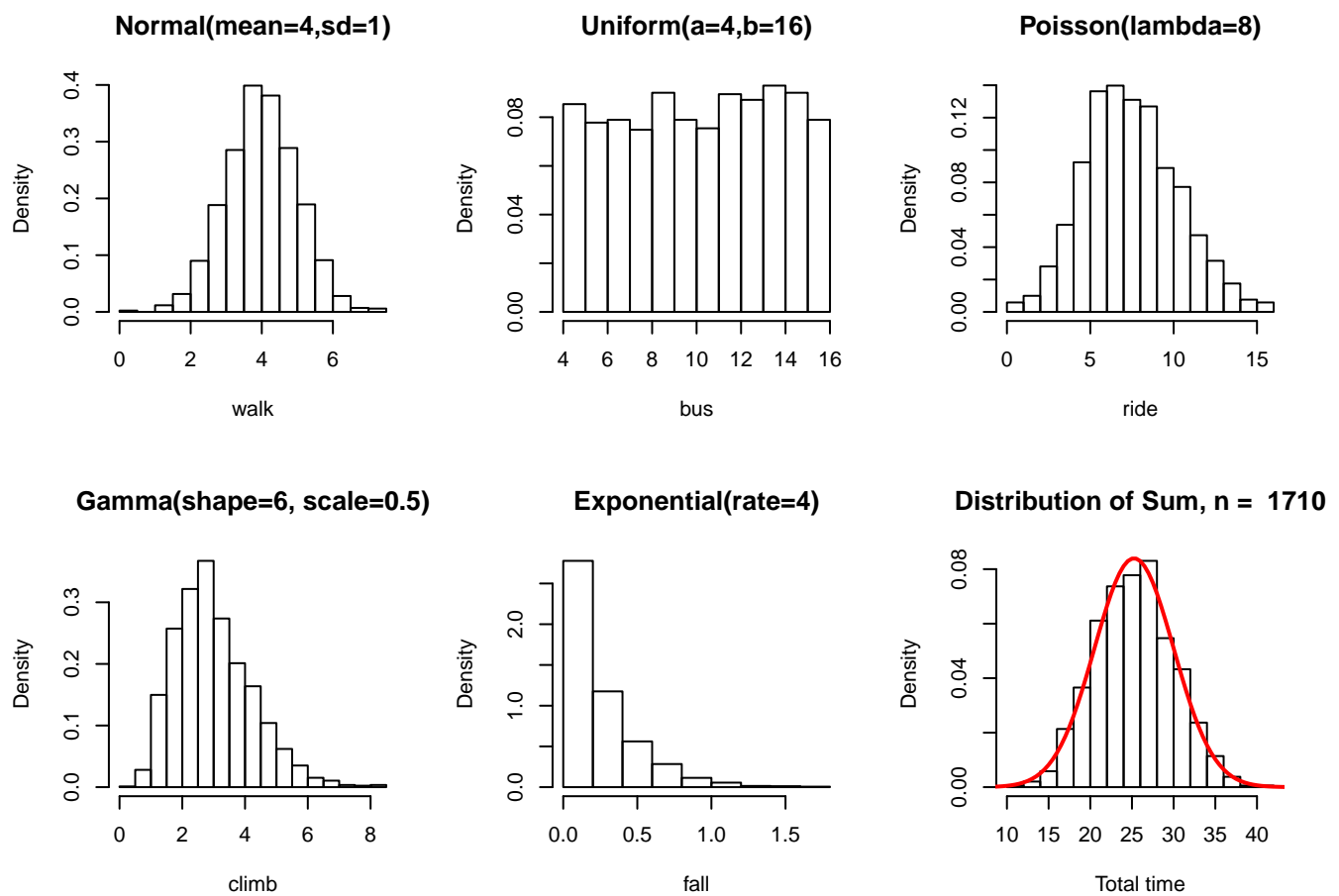
2.13 $n = 1210$ Figure 13: CLT in Action with $n = 1210$

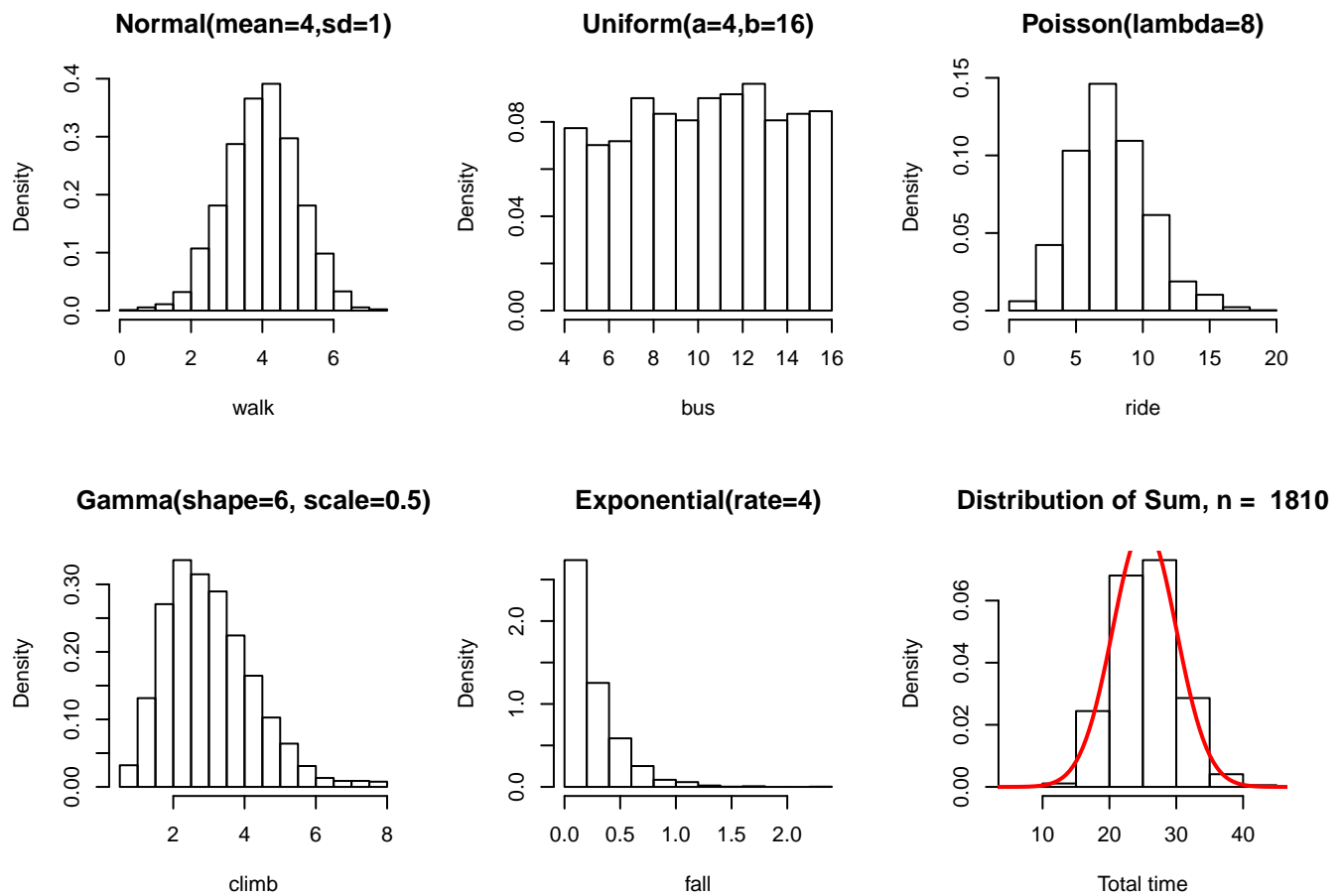
2.14 $n = 1310$ Figure 14: CLT in Action with $n = 1310$

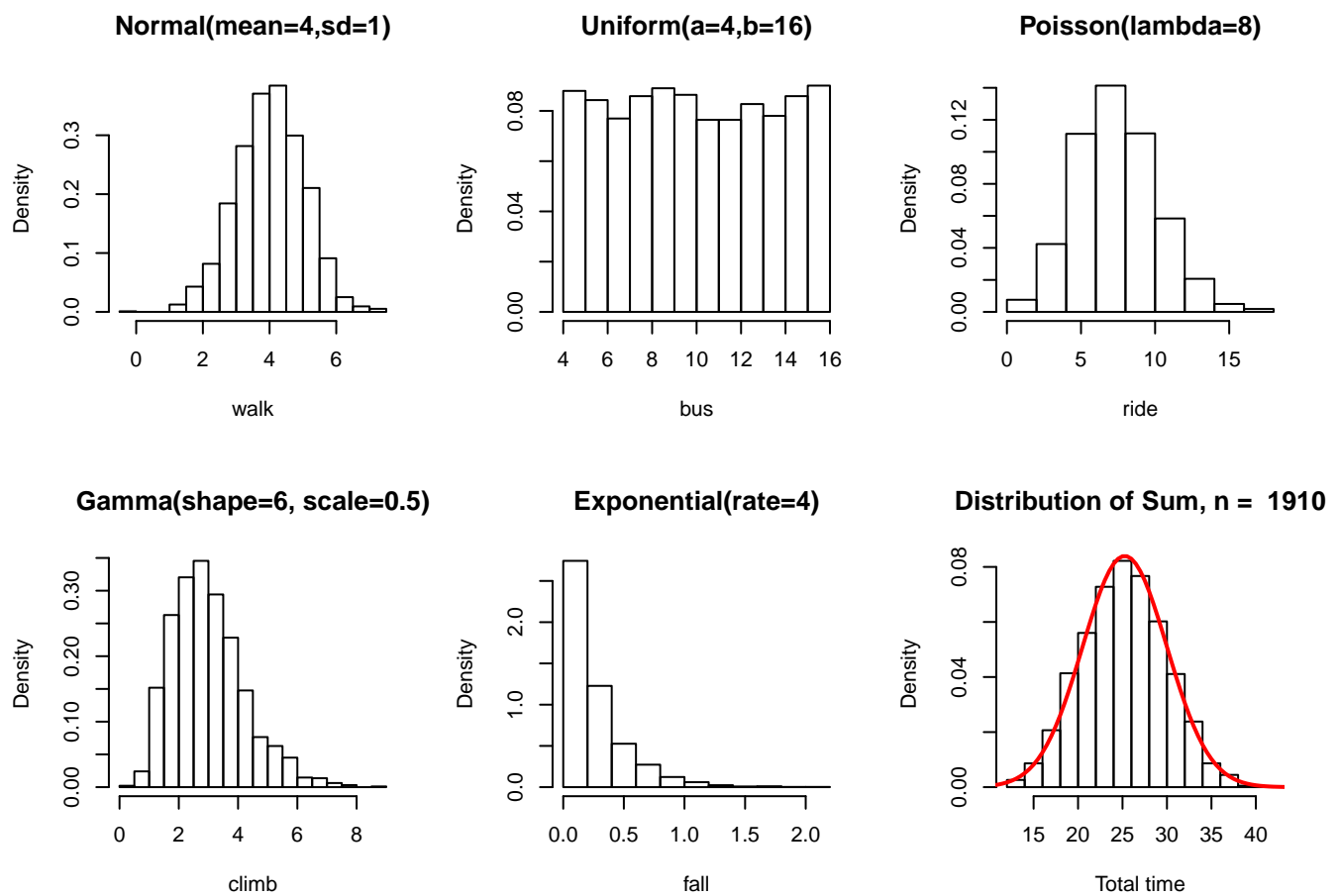
2.15 $n = 1410$ Figure 15: CLT in Action with $n = 1410$

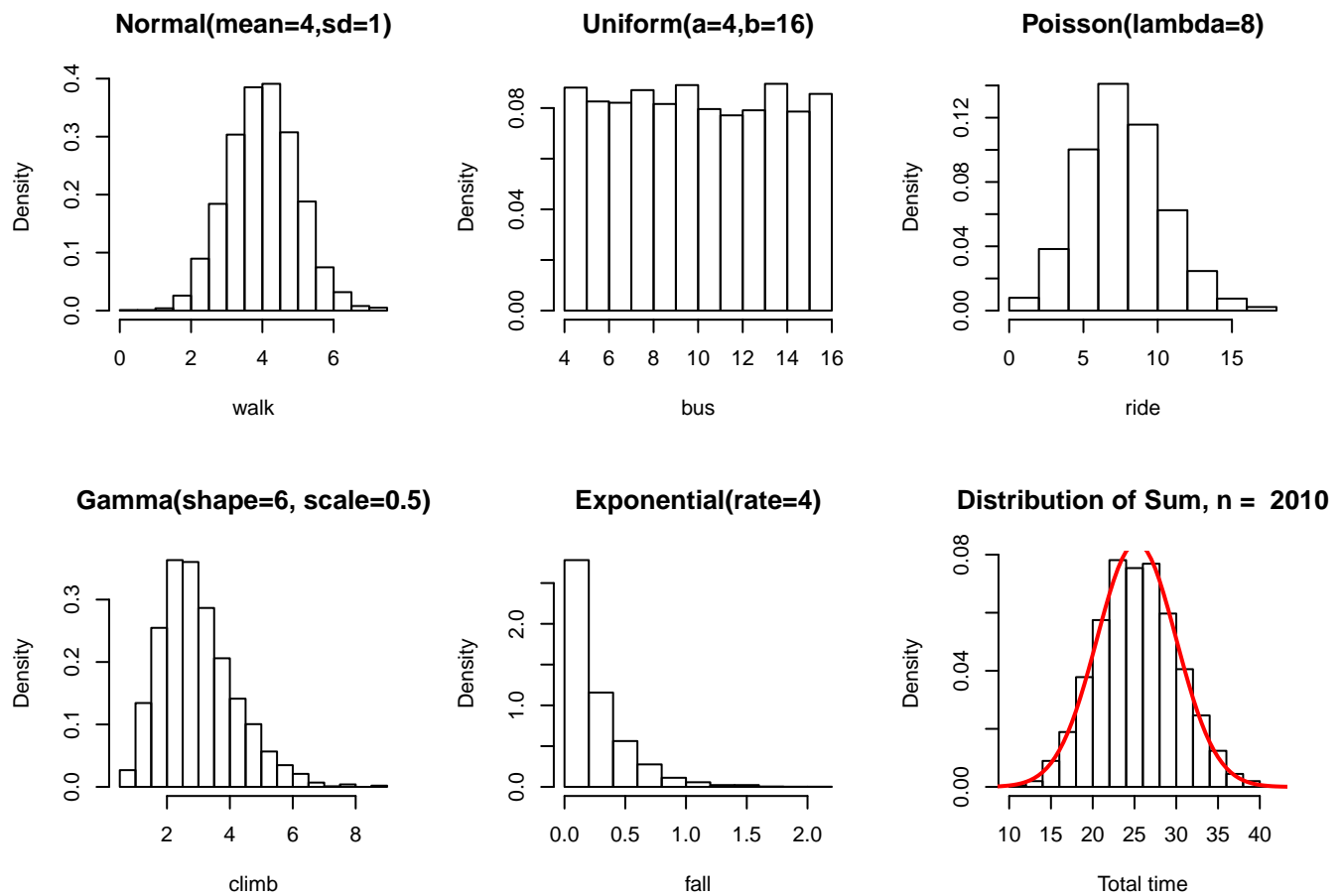
2.16 $n = 1510$ Figure 16: CLT in Action with $n = 1510$

2.17 $n = 1610$ Figure 17: CLT in Action with $n = 1610$

2.18 $n = 1710$ Figure 18: CLT in Action with $n = 1710$

2.19 $n = 1810$ Figure 19: CLT in Action with $n = 1810$

2.20 $n = 1910$ Figure 20: CLT in Action with $n = 1910$

2.21 $n = 2010$ Figure 21: CLT in Action with $n = 2010$