

ACSTA 101: Section 5.4 Practice Problems

- (1) Cell phone bills for residents of a city have a mean of \$47 and a standard deviation of \$9, as shown in the figure. Random samples of 100 cell phone bills are drawn from this population, and the mean of each sample is determined. Find the mean and standard deviation of the sampling distribution of sample means.
- (2) Some college students use credit cards to pay for school-related expenses. For this population, the amount paid is normally distributed, with a mean of \$1615 and a standard deviation of \$550.
- (a) What is the probability that a randomly selected college student, who uses a credit card to pay for school-related expenses, paid less than \$1400?
  - (b) You randomly select 25 college students who use credit cards to pay for school-related expenses. What is the probability that their mean amount paid is less than \$1400?