8.1 Answers 489, #1,3,5,7

1. sample mean = $\bar{x}$ = 607/20 = 30.35
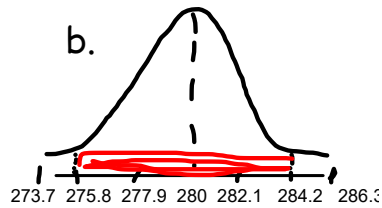
3. Sample proportion, $\hat{p}$ = 36/50 = 0.72

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5. SRS = 840

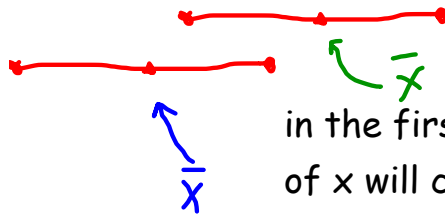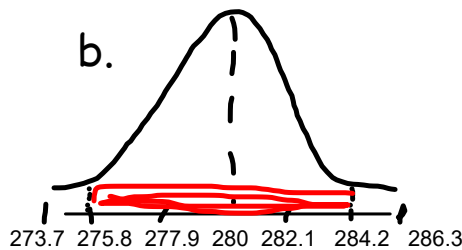   mean = $\bar{x}$ = 280

   s.d. = σ = 60

a. approx normal with
mean $\mu_{\bar{x}}$ = 280 and
$\sigma_{\bar{x}}$ = 60/$\sqrt{840}$ = 2.1

b.

273.7 275.8 277.9 280 282.1 284.2 286.3

c. about 95% of all $\bar{x}$
values will be within 2
standard deviations
of the mean. so,
m = 2(2.1) = 4.2

d. about 95% as per
the 68-95-99 rule

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7.

b.

273.7 275.8 277.9 280 282.1 284.2 286.3

$\bar{x}$

$\bar{x}$

in the first interval, the value
of x will contain the
population mean of 280.

The second interval will NOT contain the pop.
mean of 280.