

Nearly all values below are approximate. In general, round to one more decimal place than the given data or to 4 decimal places (like many of the tables), depending on the nature of the problem.

1. (a) Yes (b) No (c) No (d) Yes (e) Yes

2. $\frac{11,008}{19,683} \approx 0.5593$ or 55.93%

3. 0.82

4. (a) 0.9803 or 98.03% (b) 0.2514 or 25.14% (c) 0.3434 or 34.34%

5. 70 (or 71)

6. (a) 0.1255 or 12.55% (b) 0.4608 or 46.08%

(c) By the Central Limit Theorem, sample means are less variable than individual data values.

7. (a) 82 (b) $77.0 < \mu < 87.0$ (c) $75.5 < \mu < 88.5$

(d) The 99% confidence interval is larger because the confidence level is larger.

8. $\bar{X} = 41.6$ $s = 6.0$

$38.8 \text{ g} < \mu < 44.4 \text{ g}$

9. $\hat{p} = \frac{36}{85} \approx 0.424$

$0.285 < p < 0.562$ or $28.5\% < p < 56.2\%$

Since 0.52 is in this interval, the difference isn't considered statistically significant (at the 99% confidence level).

10. $4.1 \text{ min} < \sigma < 7.1 \text{ min}$

Do your best! Live and learn!