

*The Practice of Statistics for AP\**  
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**Student Errata**

As of January 9, 2013

*This errata listing includes all errors found since the first printing of the text. Depending on the printing you have some of these corrections may already have been made.*

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## **Textbook**

Page xi, right column, under “Why did you choose this inference sequence?”: The sixth sentence should read “This allows us to say “ $z$  is for proportions and  $t$  is for means” in Chapter 8 and again in Chapters 9 and 10.

Page 47, Exercise 63: In the table, there are two errors.

- (1) In the 45 – 50 row, change the value in the % column for Men from 1.4 to 1.3.
- (2) In the Total row, change the value in the % column for Men from 100.0 to 99.9.

Page 118, Technology Corner: In Step 2 for the TI-83/84, it should say  $Y_{\min} = -.1$

Page 132, Exercise 56: Second-to-last sentence should read: “The restaurant’s lid supplier claims that the diameter of their large lids follows a Normal distribution with mean 3.98 inches and standard deviation 0.02 inches.”

Page 138, Exercise T2.2: Change answer choice (d) to 3, which is the correct answer.

Page 193, Exercise 55(b): Change 1<sup>st</sup> sentence to “Which point has the largest size residual?”

Page 196, Exercise 73, 2<sup>nd</sup> sentence: Change to “You perform least-squares regression on the age at death  $y$  of a large group of male smokers and the number of packs per day  $x$  they smoked.”

Page 199, Exercise R3.5. The table headings say: “Temperature ( $^{\circ}\text{C}$ ) to first bloom:” and “Days in April”. The table headings SHOULD say “Temperature ( $^{\circ}\text{C}$ )” and “Days in April to first bloom.”

Page 272, Exercise R4.3(b): Change second sentence to “Show how you are using the digits below.”

Page 363, Example solution to Part (a): both “ $y$ ” should be capitalized.

Page 429, Exercise 11(a): Change first sentence to “Make a graph of the population distribution given that the newspaper’s claim is correct and that there are 3000 students in the school.”

Page 462, AP2.7: The answer choices are out of order. It should read:  
“(a) 404, (b) 418, (c) 448, (d) 411, (e) 425.”

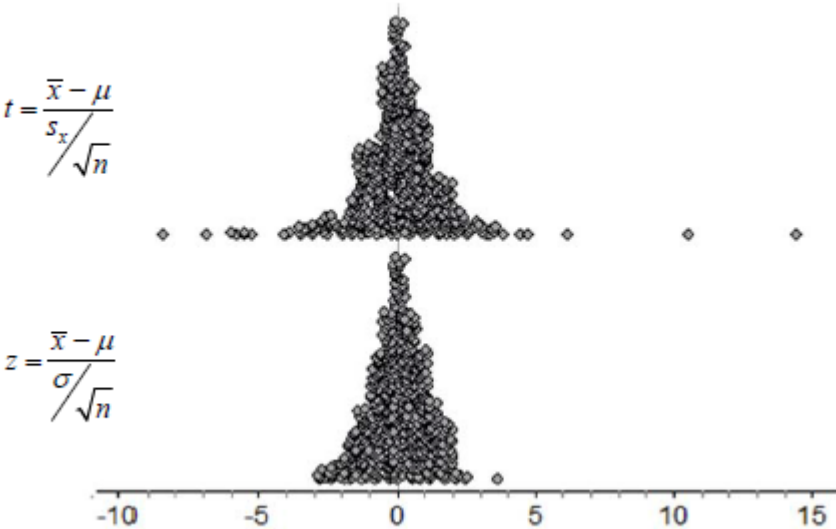
Page 464, AP2.20: The dollar values in the parentheses should read, “(\$500, 100, \$25).”

Page 465, Exercise AP2.24: In line 7, add the word “dead” before “cicadas”

Page 496, Exercise 27:

- Change title of exercise to “Rating school food”
- In line 2, change to “...proportion of the seniors at her boarding high school...”

Page 504, Figure 8.12 should be:

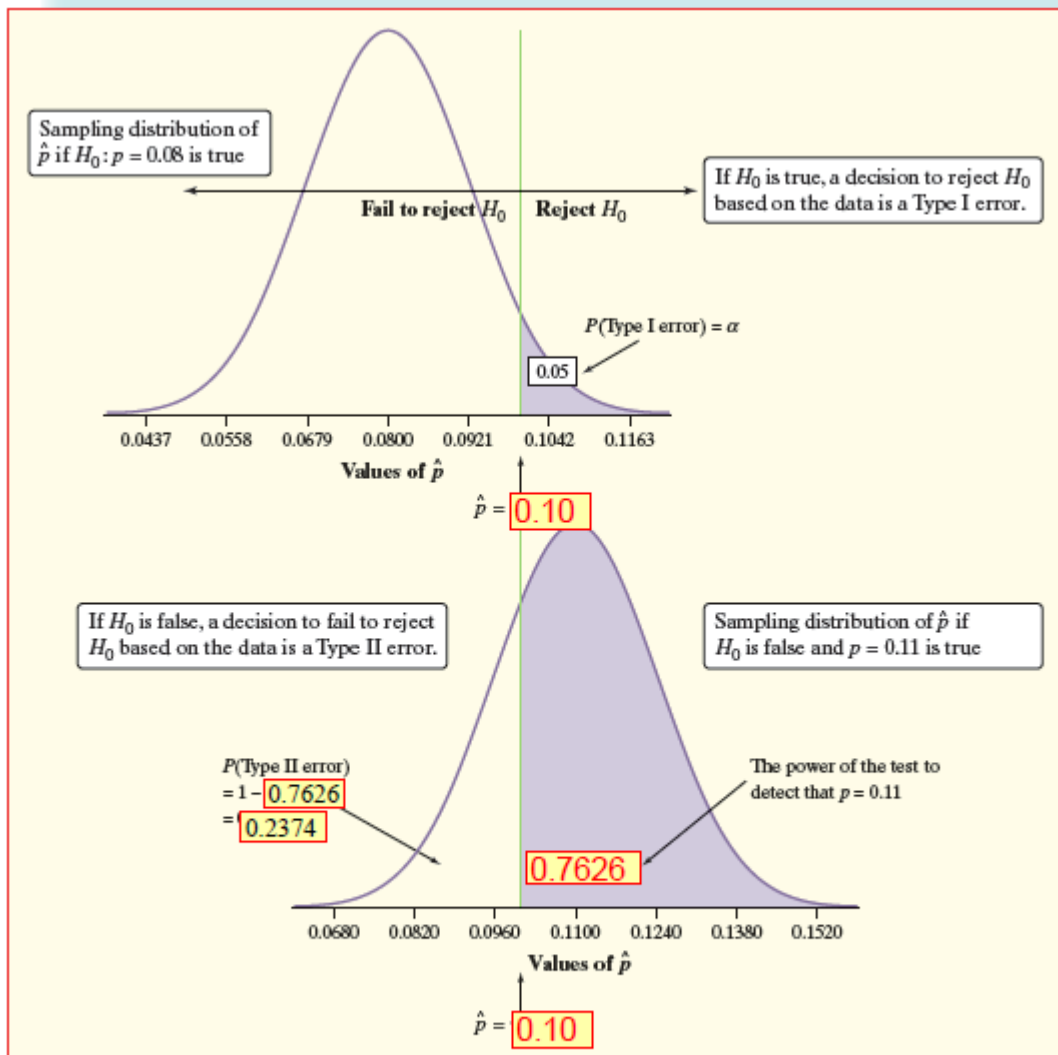


Pages 539-542:

Page 539: 3<sup>rd</sup> to last line in blue Example box should read: “green line at  $\hat{p} = 0.10$ ”

Page 540: Label at bottom of Figure 9.3 should read “ $\hat{p} = 0.10$ ” rather than  $\hat{p} = 0.9999$ .

Page 541: Figure 9.4 and its caption should be:



**FIGURE 9.4** The power of the test (shaded area) is the probability that it correctly rejects  $H_0: p = 0.08$  when the truth is  $p = 0.11$ . In this case, power = 0.7626. The probability of making a Type II error (white area) is  $1 - 0.7626 = 0.2374$ .

Page 542: The first sentence of the second full paragraph below Example box should read: “After reading the example, you might be wondering whether 0.76 is a high...”

Page 542: The last line on the page should read: “significance level of  $\alpha = 0.05$  is about 0.76.”

Page 609, Summary Box in middle of page: In line 2, it should read "...approximate level  $C$  confidence interval for  $p_1 - p_2$  is..."

Page 610, Example: In the DO step, the confidence interval formula should read

$$(\hat{p}_1 - \hat{p}_2) \pm z^* \sqrt{\frac{\hat{p}_1(1-\hat{p}_1)}{n_1} + \frac{\hat{p}_2(1-\hat{p}_2)}{n_2}}$$

Page 709, Computer Output: "Franch" should be "French".

Page 728, Exercise 49(b): In line 3, "independent" should be "dependent".

Page 803, Exercise AP4.23: Answer choice (b) should be "Convenience, SRS, stratified, cluster".

Page S-2, solution to Check Your Understanding, page 34, #1. Should read: "...Finally, both males and females have distributions that are skewed to the right, though the distribution for the males is more heavily skewed, as evidenced by..."

Page S-3, solution to #39(a). Should read: "...won by two goals." (right now it reads "points").

Page S-4, solution to Check Your Understanding, page 55, #2. Should read "...which is 22.5 minutes."

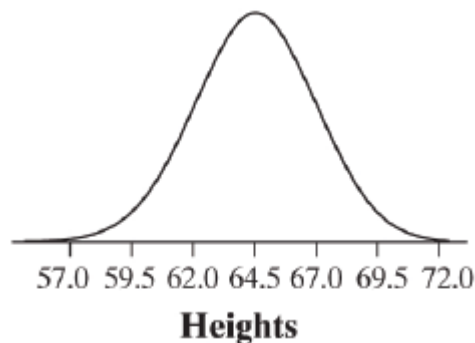
Page S-7, solution to T1.12(b).

Change  $IQR = 77 - 30 = 43$  (43 should be 47)

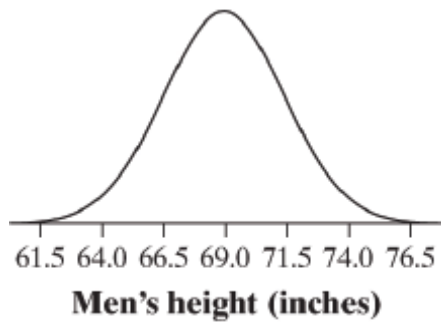
Change  $30 - 1.5(43) = -34.5$  (43 to 47, 34.5 to 40.5)

Change  $77 + 1.5(43) = 141.5$  (43 to 47, 141.5 to 147.5)

Page S-9, solution to Check Your Understanding, page 114, #1. Figure should be:

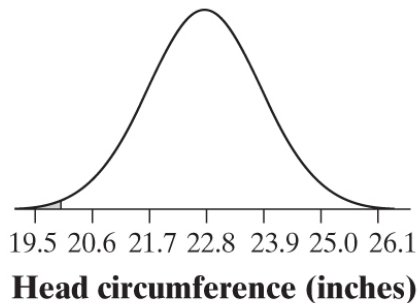


Page S-10, solution to 41. Figure should be:



Page S-13, solution to T2.12(a): last line before figure should read “...soldier’s head circumference is *at* approximately...”

Page S-13, solution to T2.12(b). Figure should be:



Page S-22, solution to R4.8. Should read “...half to be in one group and the other half to be in the second group.”

Page S-25, solution to Check Your Understanding, page 303, #2. Should read: “ $P(\text{face card and heart}) = \frac{3}{52}$ .”

Page S-26, solutions to Check Your Understanding, page 321, #2. Should read: “ $P(\text{laptop}) = P(\text{laptop} \cap \text{CA}) + P(\text{laptop} \cap \text{TX}) + P(\text{laptop} \cap \text{NY}) = 0.65$ .”

Page S-26, solution to 69. Should be:  $P(D) = \frac{60}{100} = 0.60$ .

Page S-32, solution to Check Your Understanding, page 390, #3. Should read: “...chance that a student would pass, so we would be quite surprised if Patti was able to pass.”

Page S-36, solution to 61(b): Should read “If  $W$  is total weight and  $\bar{x} = W/30$ ...” (right now the denominator is 20)

Page S-37, solution to T7.12(b): In 4<sup>th</sup> line, it should say “ $\sigma_{\bar{x}} = \frac{10}{\sqrt{500}} = 0.4472$ ” (right now the numerator is 100)

Page S-47, solution to 10.21, in the “Do” section: The 3<sup>rd</sup> sentence should read: “The test statistic is  $z = 1.59$  and the  $P$ -value is  $2P(z > 1.59) = 0.1118$ .”

Page S-53, solution to Check Your Understanding, page 681, #3. Should read:

$$\chi^2 = \frac{(12-10.58)^2}{10.58} + \frac{(7-10.58)^2}{10.58} + \frac{(13-6.9)^2}{6.9} + \frac{(4-6.9)^2}{6.9} + \frac{(8-5.52)^2}{5.52} + \frac{(2-5.52)^2}{5.52}$$
$$= 0.1906 + 1.2114 + 5.3928 + 1.2188 + 1.1142 + 2.2446 = 11.3724.$$

Page S-53, solution to 3 should read:

$$\chi^2 = \frac{(83-78)^2}{78} + \frac{(29-40.5)^2}{40.5} + \frac{(20-19.5)^2}{19.5} + \frac{(18-12)^2}{12} = 0.321 + 3.265 + 0.013 + 3.000 = 6.599.$$

Page S-62, answer to AP4.41, 3<sup>rd</sup> bullet point. Last line should include: “There are more than  $10(24) = 240$  diabetic mice and  $10(18) = 180$  normal mice.”

Page S-62, solution to T12.11 (b). All instances of “Grams” should be “ounces.”

Page S-63, solution to AP4.46 (b). Should say: “ $P(\bar{x} < 3.99) + P(\bar{x} > 4.01) = 1 - \text{normalcdf} \dots$ ”

## Fathom Guide Errata

Page 117, Second paragraph. Should read: “...we’ll use a random-number function to get *poll results*, as we did with Corinne....”

## Data Sets Errata

Chapter 13 data set, in all data set formats: The entry 65.466 (final entry in list) should be 65.446.

## **TI-Nspire Activities Errata**

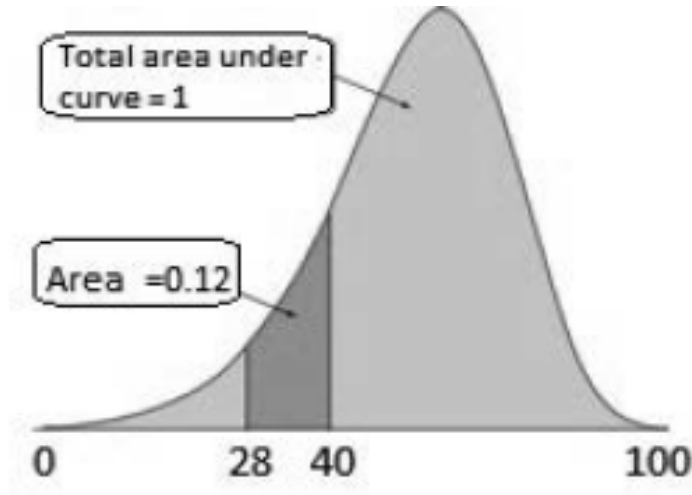
THE FOLLOWING ACTIVITIES HAVE BEEN REVISED. PLEASE FIND UPDATED ACTIVITIES ON THE BOOK COMPANION WEBSITE AT: <http://bcs.whfreeman.com/tps4e>

- Chapter 1: Bar Graphs and Pie Graphs
- Chapter 1: Two-Way Tables—Titanic
- Chapter 1: Exploring Quantitative Data Part 2 Summary Statistics
- Chapter 2: Showing Normality
- Chapter 4: Distracted Driver Activity
- Chapter 6: Binomial Distribution (PDF)
- Chapter 6: Binomial Distribution (TNS)
- Chapter 6: Exploring Random Variables
- Chapter 7: Sampling Distributions

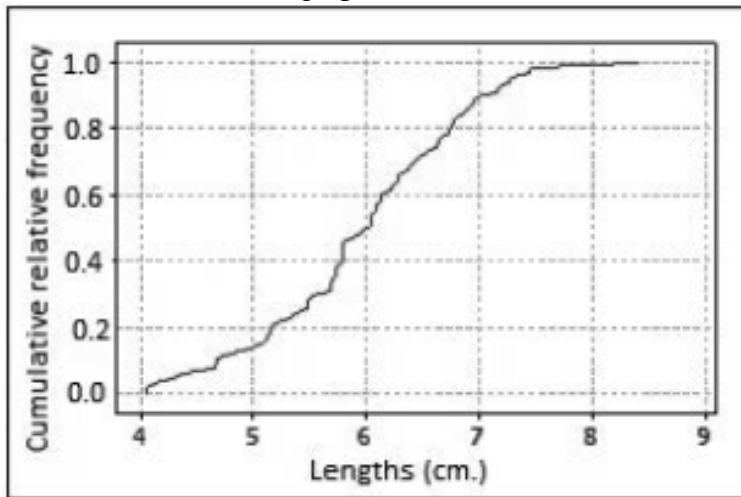


## Strive for a 5 Guide

Page 29, Check for Understanding box.  
A clearer version of the graph:



Page 35, #9.  
A clearer version of the graph:



Page 74. Concept 3: Data Ethics (optional). Paragraph should read:  
Because some sample surveys and experiments have potential to cause harm to the participants, it is important to consider data ethics when designing a study. Basic data ethics include having an institutional review board that monitors the well-being of the participants. Individuals in a study should give their informed consent before participating, acknowledging potential risks. Finally, data about individuals should be kept confidential. While data ethics are not a part of the AP exam, they are important to consider when designing statistical studies.

Page 143, Student Response 1(a).

Second line should read:  $5/\sqrt{28} = 0.945$  seconds. (square root sign is missing)

Page 143, Student Response 2(a).

Fourth line should read: “deviation is  $5/\sqrt{30} = 0.913$  seconds. (square root sign is missing)

Page 273, Section 11.2, Concept 2.

Table is currently improperly formatted. The table should look like the following:

	Zooboomafoo	iCarly	Phineas and Ferb
Boys	20 (30)	30 (36)	50 (33.3)
Girls	70 (60)	80 (73.3)	50 (66.6)

Page 274. Section 11.2, Concept 3.

Table is currently improperly formatted. The table should look like the following:

	Liberal	Conservative	Independent
Approve	10 (12.15)	15 (8.55)	20 (24.3)
Disapprove	9 (7.29)	2 (5.13)	16 (14.58)
No Opinion	8 (7.56)	2 (5.32)	18 (15.12)

Page 311, #5(c). the second line should read: “...and standard deviation  $0.79/\sqrt{4} = 0.395$  ounces...” (currently the square root sign over the 4 is missing).

313. #2, answer choices A-E should be: (several symbols were missing)

(A)  $(0.367 - 0.326) \pm 1.960 \sqrt{\frac{(0.367)(0.633)}{1500} + \frac{(0.326)(0.674)}{2000}}$

(B)  $(0.367 - 0.326) \pm 1.645 \sqrt{\frac{(0.367)(0.633)}{1500} + \frac{(0.326)(0.674)}{2000}}$

(C)  $(0.367 - 0.326) \pm 1.960 \sqrt{\left(\frac{551}{2500}\right)\left(\frac{652}{2500}\right)\left(\frac{1}{1500} + \frac{1}{2000}\right)}$

(D)  $(0.367 - 0.326) \pm 1.645 \sqrt{\left(\frac{551}{2500}\right)\left(\frac{652}{2500}\right)\left(\frac{1}{1500} + \frac{1}{2000}\right)}$

(E)  $(0.367 - 0.326) \pm 1.960 \sqrt{(0.367)(0.326)\left(\frac{1}{1500} + \frac{1}{2000}\right)}$

Page 315, #10, answer choices A-E should be: (several symbols were missing)

- (A) 1
- (B)  $1/6$
- (C)  $\binom{6}{1} \left(\frac{5}{6}\right)^5 \left(\frac{1}{6}\right)$
- (D)  $\left(\frac{5}{6}\right)^5 \left(\frac{1}{6}\right)$
- (E) 0

Page 316, #14 answer choices A-E should be: (several symbols were missing)

- (A)  $\frac{14.2+13.9}{2}$
- (B)  $\frac{12.3+15.7}{2}$
- (C)  $\frac{25(14.2)+28(13.9)}{53}$
- (D)  $\frac{25(12.3)+28(15.7)}{53}$
- (E) The median cannot be calculated based on the information given.

Page 328.

Model 1 should read:  $\hat{y} = 1389.72 + 6.23(\text{incentive})$

Model 2 should read:  $\hat{y} = 1365.83 + 6.217(\text{incentive}) + 47.778(\text{type}) + 0.033(\text{incentive})(\text{type})$

Page 329, #2.

Equation should read: (several symbols were missing)

$$(\hat{p}_1 - \hat{p}_2) \pm z * \sqrt{\frac{\hat{p}_1(1-\hat{p}_1)}{n_1} + \frac{\hat{p}_2(1-\hat{p}_2)}{n_2}}$$

Page 330, #26.

Equation should read: (several symbols were missing)

$$\sigma = \sqrt{\frac{p(1-p)}{n}} = \sqrt{\frac{.42(.58)}{250}} = 0.0312$$

Page 330, #27.

Equation should read: (several symbols were missing)

$$ME = z * \sqrt{\frac{\hat{p}(1-\hat{p})}{n}}$$

Page 330, #30.

Equation should read: (several symbols were missing)

$$\sqrt{6^2 + 8^2} = 10$$

Page 332, #4(a).

Final equation should read: (several symbols were missing)

Mechanics:  $z = \frac{(0.53 - 0.50)}{\sqrt{\frac{0.5(0.5)}{484}}} = 132$

Page 332, #5(b).

Equation should be: (several symbols were missing)

$$\sqrt{0.24^2 + 0.25^2 + 0.23^2 + 0.24^2} = 0.48$$

Page 332, #6(c).

Graph should be:

