

ERRATA PROBABILITY TUTORING BOOK April 93

Page 9 Line -13 $\frac{17 \cdot 16 \cdot 15 \cdot \dots \cdot 14}{3!}$ should be $\frac{17 \cdot 16 \cdot 15 \cdot \dots \cdot 14}{\boxed{4}!}$

Page 25 Outcome 2 should look say

Pick the A_H as the sure ace.

Then pick $\boxed{Q}_H, A_S, 2_D, 6_C$

Page 43 Lines 1 and 2 Delete one of the $\bar{4}$'s from $\bar{4}\bar{4}\bar{4}\bar{4}\bar{4}$

line 9 Delete the y from $P(J \text{ wins}) = \frac{1/6 \boxed{y}}{1 - (5/6)^2} = \frac{6}{11}$

Page 46 #16(b) Change C_{12} to C_1

Page 63 lines -5, -7 Change $\sum_{n=0}^{\infty}$ to $\sum_{\boxed{k}=0}^{\infty}$ (three times)

Page 70 #18 Mr X answers incorrectly $\boxed{2}\%$ of the time, not 23% of the time.

Page 77 Problem 2 Change "If it lands between 2 and 3 inches" to "If it lands between $\boxed{1}$ and 3 inches"

Page 79 line -3 Change "...the expected number of tosses in 20 throws" to "the expected number of $\boxed{\text{heads}}$ in 20 throws"

Page 88 line 8 Let X be the ~~expected~~ number of rolls in a game.

Delete the word "expected" .

Page 118 Figure P.3 The curved part between $x = 0$ and $x = 1$ should be labeled $\frac{1}{3}x^2$

Page 126 #6 Change "just as likely to finish up by time t " to "just as likely to finish up in t more minutes"

Page 127 Problem 7(f) Change "3 particles arrive" to " $\boxed{4}$ particles arrive"

Page 133 In box (5), the second line should be "is the same for all normal distribution \boxed{s} ..."

Page 142 In the last line change $f_X(x) = F'_X(x)$ to $f_Y(y) = F'_Y(y)$

Page 181 Problem 1(c) should end with ≤ 4 , not > 1

Page 191 Figure P.4 The 1 on the x -axis should be 2

Page 194 We have $\boxed{-1/\sqrt{2}}$ $\leq \max \leq 1$ so

$$F_{\text{ma}}(z) = \begin{cases} 0 & \text{if } z \leq \boxed{-1/\sqrt{2}} \\ 1 & \text{if } z \geq 1 \end{cases}$$

case 1 at the bottom of the page should be $\boxed{-1/\sqrt{2}} \leq z \leq 0$

And the integrand should be $z \boxed{+} \sqrt{1-x^2}$

Page 195 The caption on Figure 7 should be $\boxed{-1/\sqrt{2}} \leq z \leq 0$

Page 311 #24 (b) Answer should be $1 - e^{-8} \boxed{-8e^{-8}} - \frac{64e^{-8}}{2!}$

Page 312 #30 $P(\text{ends in 6 games}) = P(\text{A wins in 6 games})$

$$\boxed{+} P(\text{B wins in 6 games})$$

Page 316 #40 Final answer is $1 - \boxed{q}^n - \binom{n}{1} p q^{n-1}$

Page 333 Last line. $(e^6)^{-3}$ should be $(e^{-6})^3$

Page 335 #3 In the $F(x)$ formula, change $\frac{1}{2}(x-3)$ if $3 \leq x \leq 5$ to

$$\boxed{\frac{1}{4}(x-1)} \text{ if } 3 \leq x \leq \boxed{4}$$

Page 344 #7 (g) In the answer, e^{-210} should be e^{-10}

Page 372 #6

$$\text{fav} = 4 - \text{unfav} = 4 - 2 \text{ area I}$$

$$= 4 - \boxed{2} \int \dots dx = 4 - \boxed{2} \left(\frac{3}{4} - \frac{1}{4} \ln 4 \right)$$

$$\text{Answer is } \boxed{\frac{5}{8}} + \boxed{\frac{1}{8}} \ln 4$$

Page 382 #3 (b) Change the final answer from $z - \ln z$ to $-\ln z$

Page 393 line -2 Change iid to ind

Page 421 (c) Case 1 should be $\frac{1}{2} \leq x \leq 1$

Add case 0: $0 \leq x \leq \frac{1}{2}$ $P(Y \leq \frac{1}{2} | X=x) = 1$ (the whole universe is fav)

Page 426 Line 5 $P(3 \leq Y \leq 5) = \dots = \int_{y=3}^5 \int_{x=y}^8 \frac{1}{8} \frac{1}{x} dx \boxed{dy}$

Page 437 Line -7 should say it's easiest to use theorem of total expectation

Page 439 Lines -1, -2, -4

Change the factor $\frac{1}{n(n+1)}$ in front of the integral to $n(n+1)$