Errata II: Second Printing of 
Mitzenmacher/Upfal Probability and 
Computing 

Michael Mitzenmacher and Eli Upfal 

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The following errors were found after the posting the first errata, and 
after the second printing of the book: 

• Page 10, line -5: replace “are mutually disjoint sets such that” with 
“are mutually disjoint events in the sample space Ω such that”, and 
replace “= E” with “= Ω”. 

• Page 12, the equation in line 3, last part: change “2" to “2^{i+1}”. In 
line 5, change “2^{100}” to “2^{101}” 

• Page 12, line 3, change “2/n(n - 1)” to “2/(n(n - 1))”. MM: I do’t 
feel strongly about this one, up to you. 

• Page 21, line 15, change 
\[ \Pr \left( \bigcap_{i \in I} X_i = x_i \right) \] 
to 
\[ \Pr \left( \bigcap_{i \in I} (X_i = x_i) \right) \] 
MM: I do’t feel strongly about this one, up to you. 

• Page 36, Replace “There is a also” with “There is also”. 

• Page 38, Exercise 2.3: Replace “≤” with “<” and “≥” with “>”. 

• Page 60, Exercise 3.23: change the second sentence to “Bound the error probability and the running time of the resulting algorithm.”

• Page 64, line -8: change “Pr(X_i) = p_i” to “Pr(X_i = 1) = p_i”.

• Page 64, line -5: change “<” to “≤”.

• Page 66, line 2: change “Pr(X_i) = p_i” to “Pr(X_i = 1) = p_i”.

• Page 67, line 1: change “Pr(X_i) = p_i” to “Pr(X_i = 1) = p_i”.

• Page 73, line -10: change “2nN” to “nN”.

• Page 86: Exercise 4.16: change “Pr(X_i) = p_i” to “Pr(X_i = 1) = p_i”, and add the condition: “|a_i| ≤ 1 for 1 ≤ i ≤ n”.

• Page 95, line 2-3: change ”X_j” to ”X_i”, ”jth bin” to ”ith bin” and ”E[X_j]” to ”E[X_i]”. MM This change doesn’t seem necessary to me?

• Page 108, line -9: the phrase “if we use b bits for the fingerprint” should appear at the end of the prior sentence.

• Page 109, Figure. To match the text, in the figure replace x_1 and x_2 by s_1 and s_2, and replace y by x.

• Page 129, line 1: change “at least $3” to “$3”.

• Page 133, Theorem 6.5: Change “be a graph” to “be a connected graph”.

• Page 184, Exercise 7.19: change “until they” to “until she”. MM This change doesn’t seem necessary to me? But if you like, we also have to change lose to loses and win to wins.

• Page 190, line 4: change “[x, x + dx]” to “(x, x + dx)”.

• Page 190, line 9: change “Pr(a ≤ x < b)” to “Pr(a < x ≤ b)” MM: this change doesn’t seem to match the text line above.

• Page 197, Figure 8.4 (a) and (b): change the indeterminate term in the density function and the distribution function from “t” to “x”.

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• Page 232, line 16: change “most likely be” to “most likely to be”.

• Page 274: Definition 11.2: change “of a Markov chain” to “of an ergodic Markov chain”.

• Page 278, line -13: In the equation, replace “ln(k/\epsilon^{-1})” should be “ln(k\epsilon^{-1})”.

• Page 284, line -2: change “A(t)” to “A_\ell”.

• Page 290, Exercise 11.3: change “for shuffling cards” to “for shuffling n cards”.

• Page 299, line 12: change “X_0, X_2,” to “X_0, X_1,”.

• Page 315, line 7, change

\[ \Pr \left( \bigcap_{i \in I} X_i = x_i \right). \]

• Page 321: caption of section 13.3: change to “Universal Families of Hash Functions”.

• Page 323, line 14: change “0 \leq b \leq p” to “0 \leq b \leq p - 1”.

• Page 326, line -9 and line -3: change “=” to “\leq”.

• Page 335, Exercise 13.12: change “0 \leq b \leq p” to “0 \leq b \leq p - 1”.

• Page 336, line -8: change “the reduction” to “for any constant d the reduction”.

• Page 342: line - 15: change “R = \langle n \rangle” to “R = \lceil n \rceil”.

MM: I don’t feel strongly about this one, up to you.