

**Solutions Manual for
Probability and Statistics with Applications
Errata List as of September 5, 2013**

Pg 2: 1-4, after the first sentence, add the following: "The problem mentions "new shoes" or a "new shirt" only. Hence the solution is "new shoes."

Pg 9: 1-52 should read ${}_{36}C_{21} \cdot {}_{45}C_{21} = 2.101 \times 10^{22}$

Pg 13: Answer to #2 should be $7 \cdot 9 \cdot 9 \cdot 10 \cdot 10 \cdot 10 = 5,670,000$

Pg 59: Answer to 3-36, - replace 17.45139 with 17.2397 and replace .799 with .7871 (last line of page).

Pg 68: Chapter 3 Exam 4(f) should read $CV_x = \frac{50.74}{25} = 203\%$

Pg 71: Chapter 3 Exam 14(c) should read $CV_x = \frac{\sqrt{876}}{12} = 247\%$

Pg 77: 4-19 last two lines should read:

$$\begin{aligned}\sigma_x^2 &= (20)(.25)(.75) = 3.75 \\ \sigma_x &= \sqrt{3.75} = 1.936\end{aligned}$$

Pg 85: 4-59 change .149 to .199

Pg 86: 4-65(a) should read $e^{-5} \left[\frac{5^0}{0!} + \frac{5^1}{1!} + \frac{5^2}{2!} \right] = .1247$

Pg 86: 4-65(b) should read 5

Pg 87: 4-68 replace .000008 with 0.00000136

Pg 94: #7 – change .0747 to .2240

Pg 100: 5-14(a) change numerical answer from 2.027 to 2.0207

Pg 101: $f'(x) = 6 - 12x$, so ...

Pg 109: 5-50 replace all with:

$$M_x(t) = E[e^{tx}] = \int_0^{\infty} e^{tx} \cdot \frac{1}{3} e^{-(1/3)x} dx = \frac{1}{3} \int_0^{\infty} e^{-(1/3-t)x} dx = -\frac{1}{3} \frac{1}{(1/3-t)} e^{-(1/3-t)x} \Big|_{x=0}^{\infty} = \frac{1}{1-3t} \quad (\text{for } t < 1/3)$$

$$M'_X(t) = 3(1-3t)^{-2} \quad M''_X(t) = 18(1-3t)^{-3}$$

$$E[X] = 3 \quad E[X^2] = 18 \quad \text{Var}[X] = 18 - 3^2 = 9$$

Pg 126: 6-56(a) 2nd line should read: $\Pr[M = 3] = \frac{e^{-4} \cdot 4^3}{3!} = .1954$

Pg 145: 7-35 replace .3973 with .6027

Pg 204: 10-15 replace with:

$$\frac{11 \cdot 4 + 11 \cdot 12}{20} = 8.8 \Rightarrow S_p = 2.966 \quad \text{with} \quad \frac{10 \cdot 4 + 10 \cdot 12}{20} = 8 \Rightarrow S_p = 2.8284.$$

In the 3rd line, the second sentence should read: $t(20) = \frac{10-9}{2.8284 \sqrt{\frac{1}{11} + \frac{1}{11}}} = .829$

In the last line, $|t - T| = |.829 + 1.725| = 2.55 (E)$