

Errata and updates for ASM Exam MFE/3F (Ninth Edition Eleventh Printing) sorted by date

- [12/30/2016] On page 399, in the solution to exercise 15.8, 6 lines below the table, change 1.1092 to 1.0192.
- [11/16/2016] On page 728, in the solution to question 4, on the tenth line (the one for r), change $\ln(55/60)$ to $\ln(55/50)$.
- [10/18/2016] On page 174, one line above the second table, change $N^{-1}(F_n(y_i))$ to $N^{-1}(y_i)$.
- [10/14/2016] On page 312, on the third line of the answer to Example 13I, change “strike price” to “stock price”.
- [9/28/2016] On page 141, on the seventh line of “2. Lognormal tree”, delete h after $(r - \delta - 0.5\sigma^2)$.
- [9/15/2016] On page 53, the solution to exercise 2.8 is incorrect. The correct solution is

To have no loss initially, we need the proceeds from the 65-strike puts (12 for each put sold) to exceed the cost of the 50-strike puts (5 for each of the ten purchased) plus the cost of the 75-strike puts (15 for each put purchased), or

$$\begin{aligned} 12x &\geq 10(5) + 15y \\ 12x - 15y &\geq 50 \end{aligned}$$

To have no loss if the 65-strike puts are exercised when the stock price is less than 50, the worst possible case is if the stock price is 0. (We assume the stock price cannot be negative.) Then the gain on ten 50-strike puts and y 75-strike puts plus the initial gain must exceed the gain on x 65-strike puts, or

$$\begin{aligned} 50(10) + 75y + 12x - 15y - 50 &\geq 65x \\ 53x - 60y &\leq 450 \end{aligned}$$

If the 65-strike puts are exercised, we can exercise the 75-strike puts simultaneously. To have no loss if the 65-strike puts are exercised when the stock price is between 50 and 65 (50 being the worst case), we need the payment on the x 65-strike puts minus the proceeds from the y 75-strike puts (since the 50-strike puts may end up being worthless) to be less than the initial gain, or

$$\begin{aligned} 15x - 25y &\leq 12x - 50 - 15y \\ -3x + 10y &\geq 50 \end{aligned}$$

The intersection of the first and second constraints is

$$\begin{aligned} 12x - 15y &= 50 \\ 53x - 60y &= 450 \\ 48x - 60y &= 200 \\ x &= 50 \\ y &= \frac{12(50) - 50}{15} = \frac{110}{3} \end{aligned}$$

The intersection of the first and third constraints is

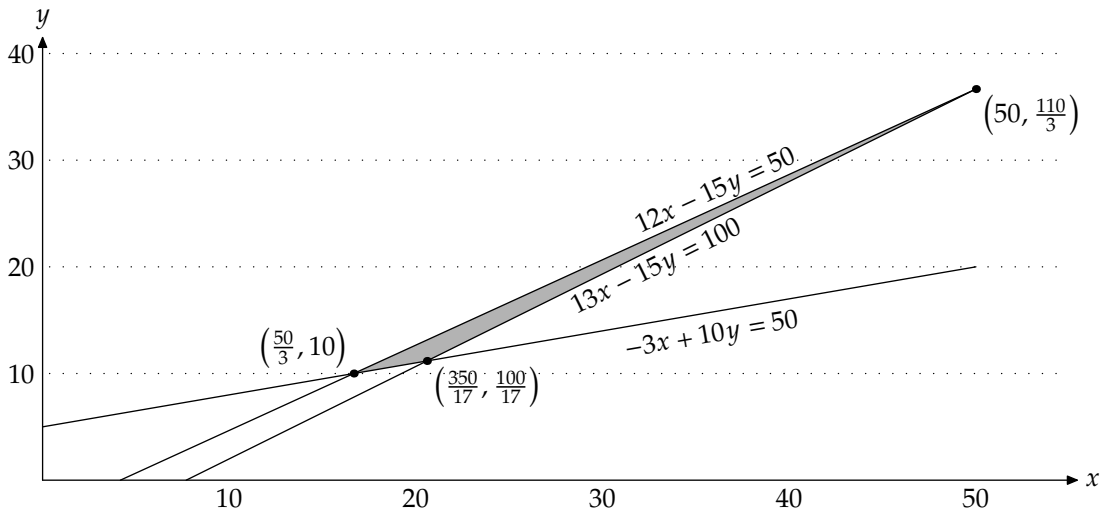
$$12x - 15y = 50$$

$$\begin{aligned} -3x + 10y &= 50 \\ -12x + 40y &= 200 \\ y &= 10 \\ x &= \frac{50}{3} \end{aligned}$$

The intersection of the second and third constraints (not needed to answer the exercise’s question) is

$$\begin{aligned} 53x - 60y &= 450 \\ -3x + 10y &= 50 \\ -18x + 60y &= 300 \\ 35x &= 750 \\ x &= \frac{150}{7} \\ y &= \frac{50 + 3(150/7)}{10} = \frac{80}{7} \end{aligned}$$

This figure shows the area of possible (x, y) . Thus $\boxed{50/3 \leq x \leq 50}$.



Thus $\boxed{50/3 \leq x \leq 50}$.

- [8/11/2016] On page 361, in exercise 14.34, on the second line, change the first “is” to “if”.
- [8/11/2016] On page 398, in the solution to exercise 15.7, on the first line, change “parameter” to “parameters”.
- [7/18/2016] On page 823, in the solution to question 13, on the last line, change $\Pr(\ln G(1) - \ln S(1)) > 0$ to $\Pr(\ln G(1) - \ln S(1) > 0)$.
- [6/15/2016] On page 553, delete footnote 1.
- [6/9/2016] On page 473, in the solution to exercise 20.17, on the first line of the page, change $\gamma t + \gamma Z(t)$ to $e^{\gamma t + \gamma Z(t)}$.

- [5/31/2016] On page 41, on the fourth line from the bottom, change “gain of” to “gain is”.
- [5/22/2016] On page 419, 10 lines from the bottom, replace the sentence beginning “It is the limit” with
It is the limit, as n goes to ∞ , of a sum of n random variables each equal to $\sqrt{t/n}$ with probability 0.5 and $-\sqrt{t/n}$ with probability 0.5.
- [5/11/2016] On page 371, in the solution to exercise 14.30, on the fourth line, change 0.21301 to 0.21309.
- [5/6/2016] On page 264, on the sixth and eighth lines of the answer to Example 12A, change 9.542 to 9.543. Two lines from the bottom of the page, change 9.542 to 9.543 and 16.6 to 16.7. On the last line of the page, change $16.6 - 1.3 = \boxed{15.3}$ to $16.7 - 1.3 = \boxed{15.4}$. On page 265, on the seventh line, change $100(9.542 - 12.274) = -273.2$ to $100(9.543 - 12.274) = -273.1$. On the eighth line, change $-273.2 + 268.6 - 1.3 = \boxed{-5.9}$ to $-273.1 + 268.6 - 1.3 = \boxed{-5.8}$. On the second-to-last line of the answer, change $100(9.542 - 6.916) = 262.6$ to $100(9.543 - 6.916) = 262.7$. On the last line of the answer, change $262.6 - 268.6 - 1.3 = \boxed{-7.3}$ to $262.7 - 268.6 - 1.3 = -7.3$.
- [5/6/2016] On page 268, on the seventh line, change 9.542 to 9.543 in both places. On the eighth line, change 2.898 to 2.897. On the last line of the answer to Example 12D, change $7.076 - 9.542 = -2.466$ to $7.076 - 9.543 = -2.467$. In the answer to Example 12E, on the second line of (a), change $9.376 - 9.542 = -0.166$ to $9.376 - 9.543 = -0.167$. On the third line of the answer to (b), change $12.274 - 9.542 = 2.732$ to $12.274 - 9.543 = 2.731$. On the third line of the answer to (c) on page 269, change $6.916 - 9.542 = -2.626$ to $6.916 - 9.543 = -2.627$.
- [2/5/2016] On page 133, in the solution to exercise 5.10, on the last line, put a negative sign before $4 \ln \frac{0.5201e^{-0.01}}{0.55}$.