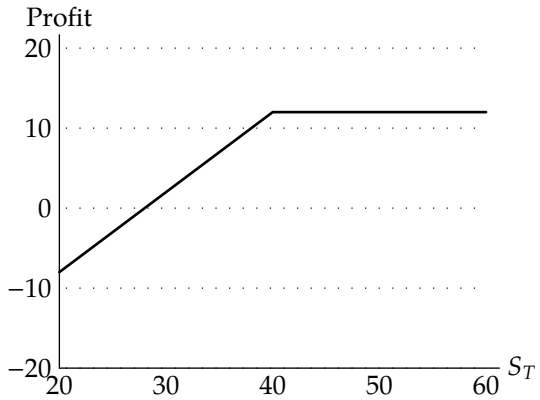
Errata and updates for ASM Exam MFE (Tenth Edition Second Printing) sorted by page.

Practice Exam 9:18 and 10:26 are defective. For Practice Exam 10:7, make the change indicated below for page 574.

[6/12/2017] On page 9, in each of the three bullets under Subsection 2.3.2, replace S_0 with S_t. On page 10, on the third line, replace S_0 with S_t twice.

[6/5/2017] On page 24, in the solution to exercise 3.3, on the first line, put an S before "$e^{(r-\delta)t}$".

[7/5/2017] On page 41, in the second graph in Figure 5.3, the line should start above -10 and flatten out above 10, so that the graph looks like this:



[2/1/2018] On page 46, in Figure 5.10, change the title on the first graph from "Net profit" to "Payoff".

[7/2/2017] On page 52, in exercise 5.7, in answer choice (C), change the last word to "contracts".

[9/19/2017] On page 56, in exercise 5.21, 2 lines below the table, at "of calls" after "bull spread" and "of puts" after bear spread.

[5/30/2017] On page 61, in the solution to exercise 5.10, on the second line, change 10 to -10. The last line should read "The minimum payoff is $\boxed{\mathbf{-10}}$ and the maximum payoff is $\boxed{\mathbf{0}}$.

[7/2/2017] On page 62, in the solution to exercise 5.12, on the third line, remove the minus sign before 9.50.

[9/14/2017] On page 82, in the solution to exercise 6.17, on the second line, change 1.04 to $e^{0.04}$.

[7/21/2017] On page 103, 9 lines above Example 7E, interchange p and q: $p = \frac{K_3-K_2}{K_3-K_1}$ and $q = \frac{K_2-K_1}{K_3-K_1}$.

[11/6/2017] On page 141, on the first line, change "page 334" to "page 315".

[8/21/2017] On page 200, two lines from the bottom of the page, replace "summed" with "multiplied". On the last line of the page, change "the sum" to "the product".

[7/11/2017] On page 230, change the second sentence of the paragraph under "Discrete Dividends" to "The Black-Scholes model assumes that S_t is continuous".

[6/21/2017] On page 251, in Table 15.2, 3 lines from the bottom, change $e^{-d^2/2}$ to $e^{-d_2^2/2}$.

[6/21/2017] On pages 258 and 273, in formula (15.9), add $\sqrt{2\pi}$ to the last denominator so that it is $2\sqrt{T-t}\sqrt{2\pi}$.

[10/31/2017] On page 259, in Table 15.6 on the last displayed line, change the plus sign before $\frac{Ke^{-r(T-t)}e^{-d_2^2/2}}{\sqrt{2\pi}}$ to a minus sign.

[6/21/2017] On pages 260 and 273, in formula (15.11), put a negative sign before $(T-t)$ at the beginning of the equation.

[6/21/2017] On pages 263 and 273, in formula (15.13), remove the negative sign before $(T-t)$ at the beginning of the equation.

[10/21/2017] On page 281, in the solution to exercise 15.11, on the thid line, change -0.245^2 to -0.005^2.

[2/5/2018] On page 281, in the solution to exercise 15.12, on the first line, change 30 to 40.

[11/6/2017] On page 294, on the last line of the page, change "30^{th}s" to "30^{th}".

[11/6/2017] On page 299, on the second line, change 1987 to 2009.

[5/17/2017] On page 309, in the first numbered list, delete "3. Greeks for binomial trees".

[6/20/2017] On page 349, on the fifth line, change "Two things" to "One thing". Delete the paragraph on the 7^{th} and 8^{th} lines.

[5/30/2017] On page 351, in exercises 18.5 and 18.6, on the second line of each, change "monthly" to "quarterly".

[6/8/2017] On page 384, on the third line of the answer to Example 19I, change $0.06125-0.25=-0.18875$ to $0.245-0.25=-0.005$. On the last line, replace the second 0.59677 with 0.49801. Replace the answer to Example 19J with

Now $\ln(S_{0.25}/\underline{S}_{0.25})=0.105361$.

$$d_5'=\frac{0.105361+\left(0.03+0.5(0.25^2)\right)(0.75)}{0.25\sqrt{0.75}}=0.69882 \qquad N(d_5')=0.75767 \quad N(-d_5')=0.24233$$

$$d_6'=0.69882-0.25\sqrt{0.75}=0.48231 \qquad N(d_6')=0.68521$$

$$d_7'=\frac{-0.105361+\left(0.03+0.5(0.25^2)\right)(0.75)}{0.25\sqrt{0.75}}=-0.27447$$

$$d_8'=-0.27447-0.25\sqrt{0.75}=-0.49097 \qquad N(d_8)=0.31172$$

$$C=50\left(0.75767-1.041667(0.24233)\right)$$
$$-45e^{-0.03(0.75)}\left(0.68521-1.041667\left(\frac{50}{45}\right)^{1-1/1.041667}(0.31172)\right)$$
$$=\boxed{\mathbf{9.4608}}$$

[5/30/2017] On page 410, in the solution to exercise 19.44, on the third line, change 0.92441 to -0.29107 and delete $N(d_5')=-0.29107$. On the last line, replace the first 0.17764 with 0.82236 and change the final answer to 16.4768.

[11/6/2017] On page 413, in Section 20.2, the current edition of McDonald only suggests the inversion method. So delete the paragraph starting with "The first method".

[11/6/2017] On page 423, in Table 20.1, on the first line, delete "as $\sum_{i=1}^{12} u_i-6$, or".

[6/19/2017] On page 443, on the first line, change "next three" to "next two".

[7/11/2017] On page 445, on the second line under "Types of Interest Rate Models", the word "martingales" is used. This term is not defined in the current syllabus's textbook readings. It means a stochastic process in which the mean value of the process at all future times equals the current value of the process.

[6/19/2017] On page 445, on the fifth line under "Types of Interest Rate Models", change "next two lessons" to "next lesson". Replace the last sentence on the page with "The Black-Derman-Toy tree, discussed in the next lesson, is an example of a short rate model.

[7/11/2017] On page 449, in exercise 21.5, change (i) to "$F(t_1, t_2)$ follows the assumptions underlying the Black formula."

[11/7/2017] On page 454, on the last line of the solution to Quiz 21-1, change $r = -0.2/3$ to $r = -0.2/-3$.

[7/11/2017] On page 482, delete the second sentence of the second paragraph.

[7/11/2017] On page 506, in question 12, change (i) to

The yen/dollar exchange rate satisfies the assumptions of the Black-Scholes formula with $\sigma = 0.3$.

[7/11/2017] On page 523, in question 4, change the first sentence to

The price of a nondividend paying stock satisfies the assumptions of the Black-Scholes formula.

[7/11/2017] On page 559, in question 22, change (i) to

The stock's price is lognormally distributed.

[2/19/2018] On page 567, in question 18, on the second-to-last line, change "margin call for 1000" to "margin call for 11000".

[7/11/2017] On page 569, replace question 22 with

You are given

(i) The price of a stock follows the assumptions of the Black-Scholes formula.
(ii) The stock's current price is 40.
(iii) The stock pays a continuously compounded dividend rate of 0.02.
(iv) The continuously compounded rate of increase in the stock price is 0.15.
(v) The annual volatility of the stock's price is 0.25.
(vi) The continuously compounded risk-free interest rate is 0.07.
(vii) A European call option on the stock expiring in 4 years has strike price 50.

Calculate the price of the call option.

(The answer choices are unchanged.)

[11/12/2017] On page 574, in question 7, negate all the answer choices.

[7/11/2017] On page 577, in question 15, replace (iv) with

The exchange rate is lognormnally distributed with $\sigma = 0.1$.

[11/14/2017] On page 616, change the last 3 lines of the solution to question 12 to

$$N(d_2) = N(-0.51263) = 0.30411$$
$$C(100, 105, 1) = 100e^{-0.08}(0.41581) - 105e^{-0.02}(0.30411) = 7.08$$

The cost of 100 options is ¥708, or $\boxed{\$\mathbf{7.08}}$.

[11/6/2017] On page 642, in the solution to question 7, the answer key should be **(C)** instead of D.

[7/5/2017] On page 666, in the solution to question 18, on the first displayed line, change AV to PV.

[7/11/2017] On page 671, replace the solution to question 4, starting with "To derive r" on the sixth line, with

We are given that $r = 0.04$. Now we calculate d_1 and $N(d_1)$, using $K = 50$.

$$d_1 = \frac{\ln(45/50) + \left(0.04 + 0.5(0.2^2)\right)(0.25)}{0.2\sqrt{0.25}} = -0.90361$$

$$N(d_1) = N(-0.90361) = 0.18310$$

$$\Delta = 0.18310 + \frac{e^{-0.90361^2/2}}{0.1\sqrt{2\pi}} = \boxed{\mathbf{2.84}} \qquad \textbf{(C)}$$

[6/28/2017] On page 677, replace the solution to question 18 with

The initial price of the futures contract is

$$250(1280e^{0.25(0.05-0.02)}) = 322{,}409$$

The initial margin is 32,240.9. The maintenance margin is 0.7(32,240.9) = 22,568.63. The mark-to-market lowered the price of the portfolio by 11,000, so the future's price became $322{,}409 - 11{,}000 = 311{,}409$. We will use 90/365 as the time remaining for the contract, although using 1/4 would not be significantly different. The index price is $Fe^{(\delta-r)t}/250$, or $311{,}409e^{-0.03(90/365)}/250 = \boxed{\mathbf{1236}}$. This is not one of the five answer choices.

[7/11/2017] On page 679, in the solution to question 22, delete the first sentence.

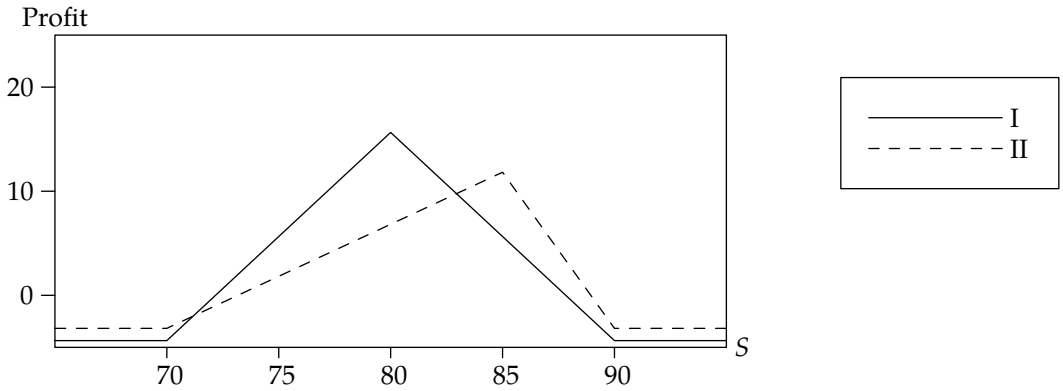
[11/12/2017] On page 684, in the solution to question 7, change the last line to

Then $\rho = -(T-t)Ke^{-r(T-t)}N(-d_2) = -0.25(104.347) = -26.0868$. In percentage points, it is $\boxed{\mathbf{-0.260868}}$. **(A)**

[11/5/2017] On page 702, the solution to question 26 is incorrect. The correct solution is:

The first butterfly spread has 2 long options apiece with strikes 70 and 90 and 4 short options with strike 80. Its price is $2(14.80 + 4.63) - 4(8.67) = 4.18$. The second butterfly spread has 1 long option with strike 70, 3 long options with strike 90, and 4 short options with strike 85. Its price is $14.80 + 3(4.63) - 4(6.41) = 3.05$. The difference in prices accumulated with interest is $(3.05 - 4.18)e^{0.04} = -1.17612$.

The following figure shows the profits of the two spreads:



The first spread has higher profit only in the interval in which its payoff exceeds the second spread by 1.17612. Let's equate the payoff of the first to the payoff of the second plus 1.17612. The first intersection is between 70 and 80.

$$2(S-70) = (S-70) + 1.17612$$

$$S = 71.17612$$

The second intersection is between 80 and 85.

$$\begin{aligned} 2(S-70)-4(S-80) &= S-70+1.17612 \\ 3S+250 &= 1.17612 \\ S &= 82.94129 \end{aligned}$$

Spread II is more profitable if $70 < S < 71.17612$ or $82.94129 < S < 90$. None of the five answer choices is correct.