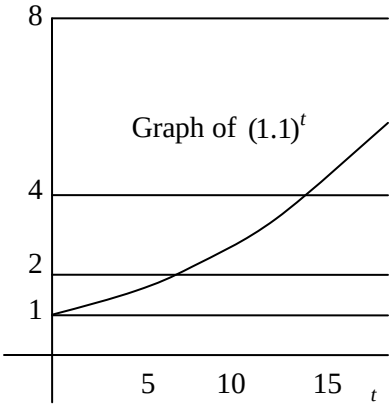
Mathematics of Investment and Credit 4-th Ed Solutions Manual

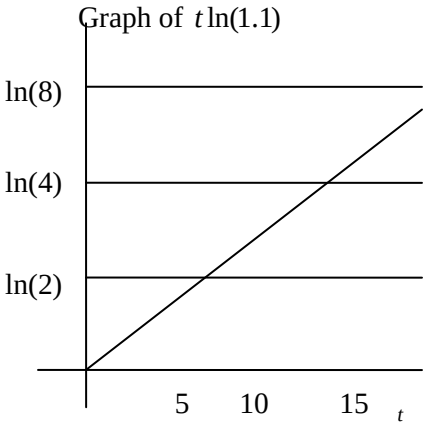
Errata List, by S. Broverman Updated February 19, 2011

Feb 19/11 Page 3, 1.1.6, simple interest rate should be .11 (not .1)

May 12/09 Page 6, 1.1.14, solution should be

Original graph is $y = (1+i)^t$. New graph is $10^y = (1+i)^t$, or, equivalently, $y = t \times \frac{\ln(1+i)}{\ln(10)}$, so that y is now a linear function of t.





Mar 29/09 Page 8, 1.2.15(b) solution should be

(b) $P = \frac{100{,}000}{1+i \times \frac{182}{365}}$ ® $\frac{dP}{di} = -\frac{100{,}000}{\left(1+i \times \frac{182}{365}\right)^2} \times \frac{182}{365}$

$= -45{,}239.03$ if $i = .10$

Mar 29/09 Page 9, 1.2.17, 2nd last line should be

$$30[v^2 + \cdots + v^{25}] = 643.67v^2 = 630.99.$$

May 12/09 Page 16, 1.5.8(a), 2nd line should be

$$1 - d \times \tfrac{n}{365} = \frac{1}{1+i\times\frac{n}{365}} \Rightarrow i = \frac{365}{n}\left[\frac{1}{1 - d\times\frac{n}{365}} - 1\right] = \frac{d}{1 - d\times\frac{n}{365}}.$$

June 10/10 Page 17, 1.6.1, first line should be

$$10{,}000 \times e^{\int_0^1 .05\,dt + \int_1^2 [.05+.02(t-1)]\,dt} = 10{,}000 \times e^{.05+.06} = 11{,}162.78$$

June 10/10 Page 18, 1.6.5, 4th line should be

$$100\left[e^{\int_0^6 .01t^2\,dt} - e^{\int_0^3 .01t^2\,dt}\right] + X\left[e^{\int_3^6 .01t^2\,dt} - 1\right] = X$$

Jan 24/10 Page 25, 2.1.11(b), the expression in the square root signs should be $1 - \dfrac{4(Y - X)}{Y}$

May 12/09 Page 28, 2.1.25, solution should be

$$\frac{1}{a_{\overline{n}|i}} = \frac{i}{1 - v^n} = \frac{i - iv^n + iv^n}{1 - v^n} = \frac{i(1 - v^n)}{1 - v^n} + \frac{iv^n}{1 - v^n}$$
$$= i + \frac{i}{(1+i)^n - 1} = i + \frac{1}{s_{\overline{n}|i}}$$

Jan 24/10 Page 31, 2.2.1(b), 3rd last line should be 2023 (not 2013)

Jan 24/10 Page 31, 2.3.1, answer is based on some slight roundoff, if exact calculator values are used with no roundoff, then the answer is 419,253

May 12/09 Page 50, 2.3.35, solution should be

$$PV = v + 2v^2 + 3v^3 + \cdots + (n-1)v^{n-1} + nv^n + (n-1)v^{n+1} + \cdots + 2v^{2n-2} + v^{2n-1}$$
$$= [v + v^2 + v^3 + \cdots + v^n] + [v^2 + v^3 + \cdots + v^{n+1}] + [v^3 + v^4 + \cdots + v^{n+1}] + \cdots + [v^n + v^{n+1} + v^{n+2} + \cdots + v^{2n-1}]$$
$$= a_{\overline{n}|}[1 + v + v^2 + \cdots + v^{n-1}] = a_{\overline{n}|}\ddot{a}_{\overline{n}|}$$

Mar 29/08 Page 75, 3.2.7S, 2nd line should be

$$\text{®} \quad X(1.06)^{10} - X = 356.54 + \frac{10X}{a_{\overline{10}|.06}} - X \quad \text{®} \quad X = 825.$$

May 12/09 Page 109, 6.1.3(a)(i) and (ii), exponent -14 should be -6

May 12/09 Page 111, 6.1.5, 2-year bond 2nd line of expression for P, the denominator at the end of the line should be $(1+j)^4$ (instead of $(1.075)^4$)

Jan 24/10 Page 131, 7.3.1(b), 2nd last line, the denominator should be 1.14 (delete the parenthesis)

May 10/10 Page 133, 7.2.5(e) , 18.30 should be 20.223

May 12/09 Page 134, 7.2.7(b), solution should be

(b) $$\frac{2A_1}{1.1} + \frac{6\times 5 A_5}{(1.1)^5} = 4403,\ 100\left(\frac{2\times 1}{(1.1)^2} + \frac{5\times 4}{(1.1)^4} + \frac{6\times 5}{(1.1)^6}\right) = 3225$$

(after multiplying by $1+i$)

Jan 24/10 Page 139, 8.1.1(a), 2nd line, there is an extra) in numerator and denominator

Dec 12/10 Page 185, Solution to Example 3.3, the equation in the 2nd line should be

$100,000 = Z\, a_{\overline{72}|.01} + 2Z\, v_{.01}^{72}\, a_{\overline{72}|.01}$ (the .005 should be .01)

Dec 12/10 Page 284, Solution to Example 5.6, in the line "t=2", the -8,000 should be -8,500