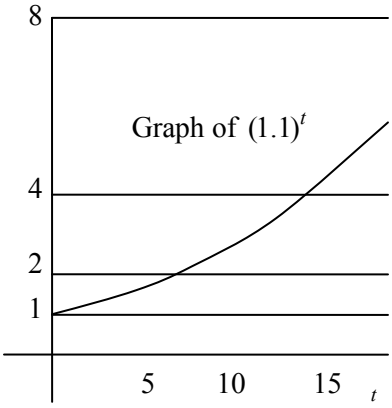
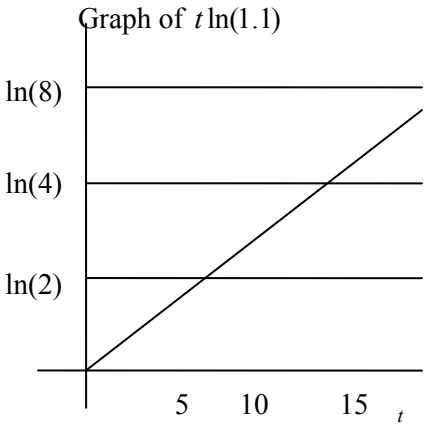
Mathematics of Investment and Credit 4-th Ed Solutions Manual

Errata List, by S. Broverman Updated August 12, 2010

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, $y=t\cdot\frac{\ln(1+i)}{\ln(10)}$, so that y is now a linear function of t.





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

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

$=-45{,}239.03$ 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

$$1-d\cdot\frac{n}{365} = \frac{1}{1+i\cdot\frac{n}{365}} \rightarrow i = \frac{365}{n}\left[\frac{1}{1-d\cdot\frac{n}{365}}-1\right] = \frac{d}{1-d\cdot\frac{n}{365}}.$$

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 $1-\frac{4(Y-X)}{Y}$

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)

Aug 12/10 Page 38, 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

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

Aug 12/10 Page 64, 3.2.7S, 2nd line should be

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

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 $(1.075)^4$)

Aug 12/10 Page 131, 7.2.1(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) $$\frac{2A_1}{1.1} + \frac{6\cdot 5A_5}{(1.1)^5} \;=\; 4403, \;\; 100\left(\frac{2\cdot 1}{(1.1)^2} + \frac{5\cdot 4}{(1.1)^4} + \frac{6\cdot 5}{(1.1)^6}\right) \;=\; 3225$$

(after multiplying by $1+i$)

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