

Practise, Apply, Solve 1.8, page 70

1. (a) $i = 0.06, n = 5$ (b) $i = 0.04, n = 18$
 (c) $i = 0.011, n = 28$ (d) $i = 0.005, n = 36$
 (e) $i = 0.05, n = 5$ (f) $i = 0.0205, n = 5\frac{1}{3}$
 (g) $i = 0.0225, n = 7$ (h) $i = 0.001, n = 104$
 (i) $i = 0.00015, n = 1095$
2. (a) 3.1384 (b) 0.3769 (c) 2.4325
 (d) 0.9140 (e) 512.6608 (f) 2837.1343
 (g) 3405.3486 (h) 12 403.0161
3. (a) amount of investment (b) principle amount invested
 (c) interest rate for each conversion period
 (d) number of conversion periods
4. (a) $A = \$4502.04, i = \$502.04$
 (b) $A = \$10\,740.33, i = \$3240.33$
 (c) $A = \$16\,906.39, i = \$1906.39$
 (d) $A = \$48\,516.08, i = \$20\,316.08$
 (e) $A = \$881.60, i = \$31.60$ (f) $A = \$2332.02, i = \$107.02$
5. (a) $P = \$4444.98, i = \$555.02$
 (b) $A = \$10\,625.83, i = \$2874.17$
 (c) $A = \$8999.01, i = \$2200.99$
 (d) $A = \$77\,030.40, i = \$51\,469.60$
 (e) $A = \$797.31, i = \$52.69$
 (f) $A = \$4849.55, i = \$1375.45$
6. The amount is the future value of the principal amount after the principal amount earns interest. The present value is the principal amount that must be invested now to grow to a specific amount in the future.
7. Plan A
8. (a) \$1628.89 (b) \$2653.30 (c) \$4321.94
9. 14 a
10. \$4353.04
11. $A = \$13\,431.36, P = \$7500$
12. \$1407.10
13. \$16 637.84
14. \$14 434.24
15. \$1348.05
16. \$5200
17. Each amount is multiplied by $(1 + i)$ each conversion period.
18. \$4514.38
19. \$4534.14
20. \$3427.09
21. (a) \$1226.32 (b) \$1178.31
22. Justin, with \$2.85 more
23. 10.4%
24. 9.75 a
25. no