Pg. 523 #2,6,7,8,10,16 (PV)

#2 a) $A = 12000$ $i = \frac{0.0625}{1}$ $n = 7 \times 1$ $PV = ?$

$= 0.0625$ $= 7$

$$PV = \frac{12000}{(1.0625)^7}$$

$$\doteq \$7850.16$$

b) $i = \frac{0.0625}{2}$ $n = 7 \times 2$

$= 0.03125$ $= 14$

$$PV = \frac{12000}{(1.03125)^{14}}$$

$$\doteq \$7799.84$$

c) $i = \frac{0.0625}{4}$ $n = 7 \times 4$

$= 28$

$$PV = \frac{12000}{(1+0.0625 \div 4)^{28}}$$

$$\doteq \$7774.04$$

d) $i = \frac{0.0625}{12}$ $n = 7 \times 12$

$= 84$

$$PV = \frac{12000}{(1+0.0625 \div 12)^{84}}$$

$$\doteq \$7756.58$$

#3. The more frequent the compounding periods, the smaller the present value of the investment.

Pg. 523 #6, 7, 8, 10, 16.

#6 $PV = ?$ $i = \frac{0.08}{2}$ $A = 17900$ $n = 2 \times 2$

$= 0.04$ $= 4$

$$PV = \frac{17900}{(1.04)^4}$$

$\doteq 15\,300.9$

$\doteq \$15\,301.00$

7. $A = 22\,000$ $i = \frac{0.07}{4}$ $n = 18 \times 4$

$= 72$

$$PV = \frac{22000}{(1 + 0.07 \div 4)^{72}}$$

$\doteq \$6308.77$

8. $A = 40000$ $n = 10 \times 2$ $PV = ?$ $i = \frac{0.0625}{2}$

$= 20$ $= 0.03125$

$$PV = \frac{40000}{(1.03125)^{20}}$$

$\doteq \$21\,616.27$

10. $PV = ?$ $i = \frac{0.03}{2}$ $A = 5000$ $n = 2 \times 2$

$= 4$

$$PV = \frac{5000}{(1.015)^4}$$

$\doteq \$4710.92$

16. $A = 20000$ $PV = ?$ $n_1 = 5 \times 2$ $i_1 = 0.03$ $n_2 = 3 \times 4$, $i_2 = \frac{0.065}{4}$

$= 10$ $= 12$

$$PV = \frac{20000}{(1.03)^{10}(1 + 0.065 \div 4)^{12}}$$

$\doteq \$12\,264.53$