Annuities - Saving_solution

Homework 05

1. $$S_1^0 = 500 * (1 + \frac{0.021}{6}) * \frac{(1 + \frac{0.021}{6})^{6*2*8} - 1}{\frac{0.021}{6}} = 57130.45$$

$$S_1^0 * (1 + \frac{0.021}{6})^{6*2*17} = 116523.2$$

2. $$S_2^1 = 1500 * \frac{(1 + \frac{0.039}{4})^{4*12} - 1}{\frac{0.039}{4}} = 91258.76$$

$$S_2^1 * (1 + \frac{0.039}{4})^{4*5} = 110803.1$$

3. a. $$S_3^1 = 3500 * \frac{(1 + \frac{0.043}{2})^{4*9} - 1}{\frac{0.043}{2}} = 75946.59$$

or

3. b. $$S_3^0 = 3500 * (1 + \frac{0.043}{2}) * \frac{(1 + \frac{0.043}{2})^{4*9} - 1}{\frac{0.043}{2}} = 77579.45$$

Note: *(However, the third saving was slightly "tricky"; the correct procedure for correct interpretation is:)*

$$S_3 = 3500 * \frac{(1 + \frac{0.043}{2})^{4*9+1} - 1}{\frac{0.043}{2}} = 81817.33$$

Volume of funds deposited only:

$$500 * 6 * 2 * 8 + 1500 * 4 * 12 + 3500 * 2 * 9 = 183000$$

, thus the amount of accrued interest:

[120272.9/304905.8/125405.8]