

1. Bond Question

Coupon payment: \$70 a year, so \$35 semiannually

Semi-Annual interest rate: $\frac{8\%}{2} = 4\%$.

$$NPV: 35 \cdot A_{0.04}^{16} + \frac{1000}{(1.04)^{16}} = 407.830 + 533.909 = \boxed{941.74}$$

(from Notes, HW)

2. Vacation Question

a). Monthly interest rate is $\frac{8.4\%}{12} = 0.007$.

$A_{0.007}^{12} = 11.47$. The \$5,000 payments are an annuity.

$$PV(\text{date 10}) = \$5000 \cdot A_{0.007}^{12} = \boxed{57,350}$$

b). $PV(\text{date 0}) = \frac{57,350}{(1.007)^{120}}$ (120 periods (months) with an interest rate of 0.7%)

$$= \boxed{\$24,831}$$

3). "Stock" Question. NPV of some investment returning 15% discounted at 15% is zero. So,

$$0 = -P_0 + \frac{\$2(.72)}{1.15} + \frac{\$5(.72)}{1.15} + \frac{\$60}{1.15} \Rightarrow P_0 = 43.43$$