

1. Consider a bond that pays \$65 semiannually. The stated annual interest rate is 12%. The face value is \$1,000 and the bond matures in 4 years. What is the bond's price? (20 points)

$$\begin{aligned} NPV = \text{Price} &= 65 A_{0.06}^8 + \frac{1000}{(1.06)^8} \\ &= 65 \left[ \frac{1}{0.06} - \frac{1}{.06(1.06)^8} \right] + \frac{1000}{(1.06)^8} \\ &= \$1031.05 \end{aligned}$$

2. A mutual fund's only asset is its holding of stocks of a certain firm. A year from now the mutual fund will receive dividend payments of \$1 million on its holding of these stocks. These dividend payments are expected to increase at 8% per year forever. The interest rate (that is relevant for valuing the stock) is 10% per year. If the mutual fund has 100,000 shares outstanding, how much is each share worth? (20 points)

$$P = \frac{Div}{r-g}$$

$$r = .10$$

$$g = 0.08$$

$$Div = \frac{1,000,000}{100,000} = 10$$

$$P = \frac{10}{.1 - .08} = \frac{10}{0.02} = \$500$$

