MATH 373
Quiz 5
Fall 2018

November 20, 2018

1. A callable bond matures at the end of 20 years for 10,000. The bond pays coupons at a rate of 7% convertible semi-annually.

   The bond can be called at the end of 14 year for a call value of 10,500. The bond can be called at the end of 16 years for a call value of 10,350. Finally, the bond can be called at the end of 18 years for a call value of 10,200.

   Determine the price of this callable bond to yield a return of 7% convertible semi-annually.

2. The stock of Bray Industries pays a quarterly dividend with the next dividend payable in 2 months. The first dividend will be 10. The second dividend will be 11. The third dividend will be 12. Each dividend will follow the same pattern with each dividend being 1 greater than the prior dividend.

   Using the dividend discount method, determine the price to yield 10% compounded quarterly.

3. The stock of Crouthamel Company pays quarterly dividends with the next dividend of 4 being paid later today. Each dividend thereafter increases 1.5% of the prior dividend. In other words, the second dividend at the end of three months will be $4(1.015)$. The third dividend paid at the end of six months will be $4(1.015)^2$, etc.

   Using the dividend discount method, determine the price of Crouthamel stock at an annual effective discount rate of 12%.