

## Chapters 1 and 2 - Simple Interest and Bank Discount

1. A \$8000 bond paying 7.6% interest is bought on 4/7/2010 and matures on 12/7/2010. On 7/7/2010 the bond is sold to a third party requiring 8%. Find the amount the third party paid and the rate of return on the original owner earned.
2. On May 8 you invest \$5000 in corporate bonds paying 3.8% interest which mature on October 29. On September 9, you sell the bonds to a third party who requires 4.5% discount interest on their money. Find the proceeds from the sale and your rate of return on both a simple interest and a bank discount basis.
3. On August 25, 2010 you borrow \$6000 which you will repay on November 20, 2010 at 3.8% interest. Find the payoff value using exact time and exact interest.
4. Using both the US Rule and the Merchant's Rule find the final payment necessary on 12/15/2010 if you borrowed \$1500 on 6/15/2008, money is worth 9.5%, and you made a payment on 9/15/2009 of \$800 and a payment of \$400 on 5/15/2010.
5. On 4/11/2011 you purchase as investments for the future a \$3000 CD earning 3.5% that matures on 8/11/2012, a \$2000 non-interest bearing bond that matures on 5/11/2013, and a \$2600 note earning 4.2% that matures on 1/11/2014. Find the proceeds if your investment portfolio is sold on 7/11/2012 to an investor requiring a discount rate of 5.75%.
6. You invest \$7500 in a startup company on 8/1/2010 and another \$15,000 on 10/1/2011 while expecting returns of \$2000 on 4/1/2011 and 8/1/2011 and returns of \$8000 on 6/1/2013, 4/1/2014, 7/1/2015, and 8/1/2016. Find the net present value at 15% and the internal rate of return.
7. You inherit enough money to buy a 276 day \$150,000 Treasury bill with a bid of 96.457. What was your rate of return on the t-bill? What is the equivalent simple interest rate of return? What should your bid on the previously mentioned t-bill be if you insist on making 12% on your investment?
8. You buy \$9875 worth of new computers for your office and receive an invoice with terms 1.5/8, n/30. If you can earn 3.2% on your money, when should you pay your bill?
9. An obligation of \$17,950 is incurred on 4/25/2010, is accruing interest at 6.8%, and is to be repaid with a payment of  $\$x$  on 2/25/2012 and a payment twice as large as the first on 5/25/2014. Find the size of the payment.