1. An investment worth $500 on January 1, 1990, is worth $600 on January 1, 1992. What is its value
   (a) On January 1, 1993, assuming simple interest
   (b) On January 1, 1993, assuming compound interest
   (c) On July 1, 1991, assuming simple interest
   (d) On July 1, 1991, assuming compound interest
   (e) On January 1, 1989, assuming simple interest
   (f) On January 1, 1989, assuming compound interest

2. At a certain rate of compound interest, it is found that 1 grows to 2 in $x$ years, 2 grows to 3 in $y$ years, and 1 grows to 5 in $z$ years. Show that 6 grows to 10 in $z - x - y$ years.

3. Henry has an investment of $1000 on January 1, 1988 at a compound annual rate of discount $d = .12$.
   (a) Find the value of his investment on January 1, 1985
   (b) Find the value of $i$ corresponding to $d$

4. A bank offers a 12% mortgage convertible semiannually. Find each of the following.
   (a) $i$
   (b) $d^{(4)}$
   (c) $i^{(12)}$
   (d) The equivalent effective rate of interest per month

5. An investment of $100 accumulates to $107 after 6 months. Find
   (a) $i^{(2)}$
   (b) $i$
   (c) $d^{(3)}$
   (d) $\delta$

6. Express the nominal rate of discount convertible monthly in terms of the nominal rate of interest convertible semiannually.