

Math 103
Simple and Compound Interest
Practice Problems with answers

1. If \$3,000 is loaned for 4 months at a 4.5% annual rate, how much interest is earned? \$45
2. A loan of \$4,000 was repaid at the end of 10 months with a check for \$4,270. What annual rate of interest was charged? 8.1%
3. A newborn child receives a \$20,000 gift toward a college education from her grandparents. How much will the \$20,000 be worth in 17 years if it is invested at 7% compounded quarterly? \$65,068.44
4. What will a \$210,000 house cost 10 years from now if the inflation rate over that period averages 3% compounded annually? \$282,222.44
5. Which is a better investment: 9% compounded monthly or 9.3% compounded annually? 9% monthly
6. If an investment company pays 6% compounded semiannually, how much should you deposit now to have \$10,000 5 years from now? \$7,440.94
7. If an investment company pays 9% compounded continuously, how much should you deposit now to have \$25,000 9 years from now? \$11,121.45
8. How long will it take \$4,000 to grow to \$9,000 if it is invested at 7% compounded monthly? 11.62 years, or 11 years and 8 months
9. How long will it take \$6,000 to grow to \$8,600 if it is invested at 9.6% compounded continuously? 3.75 years
10. How long will it take money to double if it is invested at
 - (a) 10% compounded quarterly? 7.02 years, which rounds up to 7 years and 3 months (1 quarter)
 - (b) 10% compounded continuously? 6.93 years