

For each problem, show your work, including the formulas or arithmetic procedures which you used to get your answer.

1. **(3 points)** In 2010, 13.5% of the population of the Louisville metro area was 65 years old or older, and the total population of the Louisville metro area was 741,096. How many people who are 65 years old or older lived in Louisville metro in 2010?
2. **(3 points)** Sales tax in the District of Columbia is 5.75%. The total cost of a lunch special in a DC restaurant (including tax) is \$10. What was the menu (i.e. pre-tax) cost of the special?
3. **(5 points)** I offer you a \$200 loan demanding repayment of \$250 in eight months. What is the annual *simple* interest rate which is described by these terms on the loan?
4. **(4 points)** An investment offers an annual *simple* interest rate of 1.25%. If I place \$30 in such an investment, how much will it be worth in 5 years?
5. **(5 points)** If you put \$4500 into an account which bears 2% interest *compounded annually*, how much will your investment be worth in 30 years?