

4.4. Student Emergency Financial Services, Inc., which makes small loans to college students, offers to lend \$550. The borrower is required to pay \$42 at the end of each week for 16 weeks. Find the interest rate per week. What is the nominal interest rate per year? What is the effective interest rate per year?

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CONCLUSION

4.69. A lender requires that monthly mortgage payments be no more than 25% of gross monthly income with a maximum term of 30 years. If you can make only a 15% down payment, what is the minimum monthly income needed to purchase a \$300,000 house when the interest rate is 6% compounded monthly?

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4.34. You have a habit of drinking a cup of Starbucks coffee (\$3.75 a cup) on the way to work every morning. If instead you put the money in the bank for 30 years, how much would you have

at the end of that time, assuming that your account earns 5% interest compounded daily? Assume also that you drink a cup of coffee every day, including weekends.

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4.55. How much money would be accumulated in 10 years for a deposit of \$10,000 made at the end-of-year zero if the account earned interest at 6% per year for the first three years, 9% per year for the next four years, and 7% per year for the last three years?

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4.83. You borrow \$120,000 with a 30-year term at a 9% (APR) variable rate and the interest rate can be changed every five years.

(a) What is the initial monthly payment?

(b) If the lender's interest rate is 9.75% (APR) at the end of five years, what will the new monthly payments be?

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