

1. (a) Suppose you have \$1200 in an account earning a nominal interest rate of 12% APR compounded monthly. After one month, you withdraw \$100. How much is left in the account immediately after the withdrawal?

(b) After one more month, you withdraw another \$100. How much is left in the account immediately after this second withdrawal?

(c) After one more month, you withdraw another \$100. How much is left in the account immediately after this third withdrawal?

(d) You continue like this for an entire year, 12 withdrawals of \$100 each. How much is left in the \$1200 account (with 12% APR) after these withdrawals?

(e) Why isn't the answer \$0?

Basic amortized loans questions. Use the formula $P = R(1 - (1 + i)^{-n})/i$

2. How much is a cash flow of \$100 deposited monthly for five years into an account earning 12% APR worth now?

3. How much can you withdraw every month for three years from an account starting with \$10,000 if the account earns a nominal interest rate of 12% APR compounded monthly?

4. How long can you withdraw \$100 every month from an account starting with \$6970.05 if the account is earning a nominal interest rate of 12% APR?

5. (tricky?) How long can you withdraw \$100 every month from an account starting with \$50,000 if the account is earning a nominal interest rate of 12% APR?