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Show all work to receive full credit. Supply explanations when necessary.

1. (2 points) We deposit regular semiannual payments into an account earning $7.75 \%$ compounded semiannually. What must our regular payments be if we would like to have $\$ 50,000$ in 15 years?
2. (4 points) For 20 years, $\$ 300$ per month is deposited into a regular annuity earning $4.5 \%$ compounded monthly.
(a) What is the future value of the account?
(b) How much of the future value is from interest?
3. (4 points) Jon borrowed $\$ 1699$ for 3 years at $7.5 \%$ compounded monthly. How much are his monthly payments? At the end of the 3 years, how much interest will he have paid?
