

Problem 1 (5 points): [GH 3.4.19] A couple predicts that they will need to save \$150,000 for their child's college education, and they predict that they will be able to earn about 9% interest, compounded monthly, on their investments.

(a) If they begin the deposits at the end of each month when their child is a newborn, so that they have 18 years of deposits, how large must each deposit be? Round your answer to the nearest cent.

(b) If they do not begin making deposits until the child is 10 years old, so that they have only 8 years of deposits, how large must each deposit be? Round your answer to the nearest cent.

Problem 2 (5 points): [GH 3.5.23] A car dealer offered a Ford Taurus for a total price of \$16,378. Assume that a 10% down payment was required. The customer had a choice of taking out a loan for the remaining cost of the car at 0.9% interest compounded monthly or taking a \$750 rebate to be used to reduce the size of the loan by \$750. If the rebate were taken, then the buyer could only obtain a loan at 7.95% interest compounded monthly. In either case the loan required monthly payments for 4 years. For which option are the monthly payments the lowest?