## * Give C.F.D. for each solution.

Question 1: If a fund pays $10 \%$ compounded annually, what single deposit now will accumulate $\$ 12,000$ at the end of the tenth year? If the fund pays $5 \%$ compounded annually, what single deposit is required now in order to accumulate $\$ 6000$ at the end of the tenth year?

Question 2: An individual deposits $\$ 500, \$ 1200$, and $\$ 2000$ at $t=1,2$, and 3 , respectively. If the fund pays $8 \%$ compounded per period, what sum will be accumulated in the fund at (a) $t=3$ and (b) $t=6$ ?

Question 3: Suppose you wanted to become a millionaire at retirement. If an annual compounded interest rate of $8 \%$ could be sustained over a 40 -year period, how much would have to be deposited yearly in the fund in order to accumulate $\$ 1$ million?

Question 4: An individual borrows $\$ 15,000$ at $15 \%$ compounded annually; he pays off the loan over a 5 -year period with annual payments. Each successive payment is $\$ 500$ greater than the previous payment. How much was the first payment?

Question 5: Solve Question 4 for the case in which each successive payment is $\$ 500$ less than the previous payment.

Question 6: Solve Question 4 for the case in which each successive payment is to be $10 \%$ greater than the previous payment.

Question 7: Land is purchased for $\$ 25,000$. It is agreed that land will be paid for over a $5-$ year period with annual payments and using a $12 \%$ annual compounded interest. Each payment is to be $\$ 2000$ greater than the previous payment. Determine the size of the last payment.

Question 8: Solve Question 7 for the case in which each successive payment is $\$ 2000$ less than the previous payment.

Question 9: An individual receives an annual bonus and deposits it in a savings account that pays $8 \%$ compounded annually. The size of the bonus increases by $10 \%$ each year; the initial deposit was $\$ 500$. Determine how much will be in the fund immediately after the tenth deposit.


