8.10 - Homework #1 - 10 all

1) Suppose Quinlan invests $500 at 7.8% interest, compounded continuously. How long will it take for the account to have $1500?

2) The value of a $25,000 car depreciates at a rate of 12% per year. What will the car be worth in 5 years?

3) Jason opens a savings account by depositing $1200 in an account that earns 3% interest compounded weekly. How long will it take for him to have $2500?

4) You buy a new computer for $1100. The computer decreases by 25% annually. When will the computer have a value of $500?

Sophie deposits $100.

5) How long will it take for Sophie's money to double in value if her account earns 6% interest compounded continuously?

6) How long will it take for Sophie's money to triple in value if her account earns 2.4% interest compounded semiannually?

7) How long will it take for Sophie's money to be worth $600 if her account earns 3.5% interest compounded monthly?

Amelia gets her first full-time job with a starting salary of $25,000. She will earn an 8% raise every year. Determine how many years it will take for her salary to reach each amount.

8) at least $30,000
9) at least $50,000
10) at least $100,000