Additional Exercises for Section 4: Page 173

1.
    a. 2300*(1+.032)^12 = $3,356.48
    b. 2300*(1+(.032/4))^48 = $3,371.58
    c. 2300*(1+(.032/12))^144 = $3,375.01
2.
    a. 855*(1+.04)^5 = $1,040.24
    b. 855*(1+.04/4)^20 = $1,043.26
    c. 855*(1+.04/12)^60 = $1,043.95
3. The initial deposit is not important, so you can use any figure to represent the price of the car, say $10,000. By computing 10000*(1.056)^t for different values for t, you can check to see when you hit 20,000. Somewhere between 2 and 3 years. More precisely: around 12.7 years.
4. Since interest is compounded monthly, first compute the monthly interest rate: .035/12 = .002917. The following shows the amount in the account at the end of every month after interest has been added but before the next deposit:
    - End of first month: 125*(1.002917)
    - End of second month: 125*(1.002917)^2 + 125*(1.002917)
    - End of third month: 125*(1.002917)^3 + 125*(1.002917)^2 + 125*(1.002917)
    - …….
    - End of 24^{th} month (2 years): 125*(1.002917)^24 + 125*(1.002917)^23 + … + 125*(1.002917) = 3,111.87

5. There isn't a question here! Let's assume the question is how much money on Dec. 31, 2019, ten years later.
    - Dec 31 of first year: 600*(1.065)
    - Dec 31 of second year: 600*(1.065)^2 + 600*(1.065)
    - …
    - Dec 31 of tenth year: 600*(1.065)^10 + 600*(1.065)^9 + …+ 600*(1.065) = 8,622.94.