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## Chapter 8 Assignment - Finance

1. Karl is purchasing a new television that costs $\$ 2250$. He has two different options to finance the purchase and he wants to pay off the debt in a year by making regular monthly payments. Which of the following options is the better deal, and what is the difference in amount owing? (3 marks)

Option A: Finance the purchase through the store at an interest rate of $12.1 \%$, compounded semi-weekly.
Option B: Finance the purchase with a line of credit at an interest rate of $10.2 \%$, compounded daily.
2. Determine the interest rate of a $\$ 75000$ 10-year simple interest investment if the future value of the investment is $\$ 80000$. ( 2 marks)
3. Determine the future value of quarterly deposits of $\$ 1000$ into an account that pays $5.1 \%$ interest, compounded quarterly, for 19 years. ( 2 marks)
4. Jody must now pay $\$ 30000$ to pay off her bank loan, which she borrowed 8 years ago. The loan was compounded quarterly at an interest rate of $6.1 \%$. How much did Jody originally borrow? (2 marks)
5. Rodrigo estimates that he will need $\$ 6500$ for a vacation he is planning for 18 months from now. How much money should he invest now, at $4.8 \%$ simple interest, to meet his goal? (2 marks)
6. Aria receives a two-year $\$ 9000$ discount loan at $6 \%$ simple interest. Find the actual interest rate? ( 2 marks)
7. What is a better investment: 8\% compounded quarterly or $7.5 \%$ compounded monthly? (3 marks)
8. (0.5 marks each)

The stock information for Apple Inc. over 52 weeks is given.

| Stock | High | Low | Div | YLD\% | P/E | Vol (1000's) | Close | Net CHG |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| AAPL | 118.69 | 89.47 | 2.28 | ---- | ---- | 32163 | 116.02 | +0.02 |

a. What was the highest price that the stock sold for during the last 52 weeks?
b. What was the lowest price the stock sold for during the last 52 weeks?
c. What was the amount of dividend per share that the company paid last year?
d. If you own 850 shares, how much in dividends did you make last year?
e. How many shares were traded yesterday? $\qquad$
f. What was the closing price of the stock yesterday? $\qquad$
g. Find the $\mathrm{P} / \mathrm{E}$ ratio, if the earnings per share are $\$ 8.29$
h. What was the closing price of the stock the day before yesterday?
i. Find the yield for Apple Inc. Stock.
j. If you purchased 400 shares of Apple Inc. at the low price in the last 52 weeks and sold at the close price, what profit did you make? (omit dividends)
9. An investor purchased 200 shares of stock for $\$ 35.50$ per share, and later sold them for $\$ 41.20$. The broker's commission was $1.6 \%$ on both the purchase and selling price. Find the amount the investor made or lost on the stock. (3 marks)
10. On December $1^{\text {st }}$, Marvin has an unpaid balance of $\$ 1305.50$ on his credit card. In December, he made purchases of $\$ 398.60$ and made a balance on the payment of $\$ 450.00$. The monthly interest on the unpaid balance was $2.5 \%$. Find the finance charges (interest) and the new balance on January $1^{\text {st. }}$. (3 marks)
11. Jamie bought a new car for $\$ 26000$. She made a down payment of $15 \%$ and paid off the balance in monthly payments over 2 years. Find the monthly payment if the interest rate if $12 \%$ on the amount financed. (3 marks)
12. What is the total interest paid on a $\$ 650000$ mortgage at $6.5 \%$ compounded monthly over 30 years? ( 2 marks)
13. A house sells for $\$ 720000$ and a $15 \%$ down payment is made. A mortgage was secured at $5.4 \%$ over 20 years.
a. Find the down payment. (0.5 mark)
b. Find the amount of the mortgage. ( 0.5 mark)
c. Find the monthly payment. (1 mark)
d. Find the total cost of the mortgage. (1 mark)
e. Find the total interest paid. (0.5 mark)
f. Find the total cost of the house (including the down payment). (0.5 mark)

