Worksheet 7-2: Interest Earned and Service Charges on Bank Accounts

Financial institutions pay interest when you deposit money into one of their accounts. On the other hand, they charge you fees or service charges for providing certain services. Often, interest earned on bank accounts is compounded daily and paid at the end of the month.

Calculating Interest Earned on Accounts:

1. Jodie received $530 from family members for her birthday. She plans to buy a car in the near future, and she is putting all of the birthday money towards the purchase. On June 1, she opened a savings account and deposited the $530. The account pays an annual interest rate of 0.50% compounded daily.

(a) How much interest will Jodie earn in one month?

   $i=$ $n=$

(b) How much interest will Jodie earn in six months?

   $i=$ $n=$

2. Determine the future value of each amount deposited into a daily interest savings account.

(a) $400 for one year at 2.5% per year   (b) $2500 for one week at 1% per year

Assigned Work: WS 7-2; p. 465 #2-4 (a to c), #5

Calculating Services Charges:

3. Hun's bank charges $5.95 for up to 10 transactions per month plus 75¢ for each additional transaction. In November, he made eight transactions; in December, he made 23 transactions. Determine the service charges deducted from Hun's account balance each month.

Service Charge = Monthly Fee + Cost of Extra Transactions (Number of extra transactions × Fee)

　　　In November:　　　# of transactions =　　　　　# of extra transactions =

　　　In December:　　　# of transactions =　　　　　# of extra transactions =

4. Sara has $600 in a savings account. This account pays 3.25% interest per year, compounded daily. Her financial institution does not charge a fee for transactions on her account.

(a) How much interest will Sara earn in the month of May?

(b) How much interest will she earn in one year?

For Questions 5 and 6, refer to the following table.

Banking Option 1	Banking Option 2	Banking Option 3
$9.75 per month for the first 10 transactions; $1.25 for each additional transaction	$14.75 per month for the first 25 transactions; $1.25 for each additional transaction	$24.95 per month for an unlimited number of transactions

5. In a typical month, Jack uses an automated bank machine (ABM) twice a week to withdraw cash from his chequing account. Each month, his car payment and his car insurance premium are automatically deducted from his account.

(a) How many transactions does Jack make in a typical month?

(b) Which banking option might be best for Jack? Explain.

(c) Calculate the total cost and the cost per transaction for each option.

(d) Suggest a way that Jack could reduce the banking fees that he pays each month.

6. Alex is paid bi-weekly by cheque. He usually uses his debit card two or three times per week.

(a) Which banking option might be best for Alex? Explain.

(b) On October 1, when he went online to do his banking, Alex noticed bank charge debits from his account by his bank for $9.75 and $7.50. Which banking option does Alex currently use? Explain.

(c) How many transactions were made in Alex's account last month? Explain.

(d) Calculate the total cost and the cost per transaction for Alex last month.

Answers: 1. (a) 22¢ or $0.22 (530.22 – 530), (b) $1.33 (531.33 – 530)**; 2.** (a) $410.13, (b) $2500.48**;**
3. Nov: $5.95, Dec: $15.70**; 4.** (a) $1.66, (b) $19.82**;**
5. (a) 11, (b) Option 1 (Monthly fee is the lowest and cheapest when only 11 transactions are made each month), (c) Option 1: $11, $1 Option 2: $14.75, $1.34, Option 3: $24.95, $2.27, (d) withdraw less frequently with more cash each time so fewer than 11 withdrawals would be made in one month**;**
6. (a) Option 2 (He makes more than 10 but less than 25 transactions a month, so total costs are cheaper), (b)Option 1 (There was a bank charge of $9.75 for the monthly fee), (c) 16, (d) $17.25, $1.08**.**