Interpreting Complicated Expressions—Bank Statements and Savings Accounts

Prerequisite Skills

This lesson requires the use of the following skills:

- evaluating expressions using the order of operations
- evaluating expressions for a given value
- identifying parts of an expression
- translating verbal expressions into algebraic expressions

Introduction

Algebraic expressions can be used to describe financial situations. Using an algebraic expression can make it easier to analyze financial offers. This, in turn, allows you to make better-informed financial decisions.

One important decision people make is choosing a bank to store their money, and choosing what kind of accounts to use.

Key Concepts

- The most common type of bank account is a **checking account**. A checking account is like a wallet from which cash is accessed via debit card, ATM, or personal check.
- A **debit card** is a card issued by the bank that allows you to access your account funds for purchases. Unlike credit cards, debit cards are linked directly to your own funds. Credit cards go through a third party, the credit card company.
- An **ATM (automated teller machine)** is a device that allows people to access funds in their accounts without having to go into the bank. Most ATMs allow you to check balances, transfer money between accounts, and withdraw cash.
- Most checking accounts allow ATM access using a debit card, but some still have specialized ATM cards.
- A **personal check** is a voucher that tells the account holder's bank to make a payment of a designated amount to a designated payee from the linked account. Personal checks typically come in sets called checkbooks. Not all businesses accept personal checks.

- Checking accounts usually do not accrue interest. Some things to take into consideration when choosing a checking account include:
  - **Minimum balance** requirement: Some accounts require a minimum balance, or the bank charges a fee.
  - **Direct deposit**: This allows payments to be made directly from one account to another without the need of a check or other intermediate step; most employers prefer to pay their employees via direct deposit.
  - **Online banking**: This allows customers to access most banking options via the Internet, at any time. Some features may still require in-person contact; many online banking apps do not allow remote check deposit, for example.
  - **Overdraft** protection/fees: Overdraft is when the account balance goes negative; most banks charge sizeable fees when this occurs.
  - **Bounced check fees**: If the funds in a checking count are insufficient to cover a written check, the payee will be unable to deposit or cash the check; most banks charge a fee when a check you write bounces.
  - **Maintenance fee**: Some accounts may charge an amount to keep the account open; these fees sometimes have conditions under which they may be applied.
- The second most common type of bank account is a savings account. A **savings account** is similar to a checking account, except it accrues interest and there may be a cap on the number of withdrawals you can make in a month. Most people do not make withdrawals directly from their savings accounts, but rather move funds to their checking accounts first.
- Some things to take into consideration when choosing a savings account include the interest rate, minimum balance requirements, direct deposit availability, online banking access, and maintenance fees.
- Because savings accounts accrue interest, you can find the balance of an account using the compound interest formula, $A = P\left(1 + \frac{r}{n}\right)^{nt}$, so long as no additional withdrawals or deposits are made to the account. Recall that P is the principal, r is the annual interest rate, n is the number of times interest is compounded in a year, and t is years.
- Some other kinds of bank accounts include money markets, certificates of deposit (CDs), and retirement accounts. This lesson will not focus on these types of accounts.
- Once you have a bank account, your bank will send you monthly statements. A **bank statement** summarizes activity in your account for a period of time, usually a month.

Common Errors/Misconceptions

- students sometimes forget to change the percent to a decimal
- students sometimes forget to convert months to years when calculating compound interest
- students sometimes substitute the wrong information into the compound interest formula