

Applications

There have been three great inventions since the beginning of time: fire, the wheel, and central banking.

Will Rogers, Actor and Columnist

TEACH

Exercises 2 and 3

Notice that Exercises 2 and 3 are related. In Exercise 2, students are asked to find a numerical balance. In Exercise 3, students will mimic the process used in Exercise 2 but with variables. This balance will be represented as a variable expression. When reviewing these two exercises, make a connection between them.

Exercises 5 and 6

Get students into the habit of sorting checking account transactions by credits and debits. This will help organize the given information in both exercises.

ANSWERS

1. Will Rogers indicates that banking is as essential to your daily life as fire and the wheel.
2. Jackie deposited a \$865.98 paycheck, a \$623 stock dividend check, a \$60 rebate check, and \$130 cash into her checking account. Her original account balance was \$278.91. Assuming the checks clear, how much was in her account after the deposit was made? **\$1,957.89**
3. Rich has t dollars in his checking account. On June 3, he deposited w , h , and v dollars, and cashed a check for k dollars. Write an algebraic expression that represents the amount of money in his account after the transactions. $t + w + h + v - k$
4. John cashed a check for \$630. The teller gave him three fifty-dollar bills, eighteen twenty-dollar bills, and t ten-dollar bills. Determine the value of t . **$t = 12$**
5. Gary and Ann have a joint checking account. Their balance at the beginning of October was \$9,145.87. During the month they made deposits totaling \$2,783.71, wrote checks totaling \$4,871.90, paid a maintenance fee of \$12, and earned \$11.15 in interest on the account. What was the balance at the end of the month? **\$7,056.83**
6. Anna has a checking account at Garden City Bank. Her balance at the beginning of February was \$5,195.65. During the month, she made deposits totaling \$6,873.22, wrote checks totaling c dollars, was charged a maintenance fee of \$15, and earned \$6.05 in interest. Her balance at the end of the month was \$4,200.00. What is the value of c ? **$c = \$7,859.92$**
7. Queens Meadow Bank charges a monthly maintenance fee of \$13 and a check writing fee of \$0.07 per check. Last year, Mark wrote 289 checks from his account at Queens Meadow. What was the total of all fees he paid on that account last year? **\$176.23**
8. Joby had \$421.56 in her checking account when she deposited g twenty-dollar bills and k quarters. Write an expression that represents the amount of money in her account after the deposit. **$421.59 + 20g - 0.25k$**
9. Neka cashed a check for \$245. The teller gave him two fifty-dollar bills, six twenty-dollar bills and f five-dollar bills. Determine the value of f . **$f = 5$**
10. Olivia cashed a check for \$113. The teller gave her four twenty-dollar bills, x ten-dollar bills, and three one-dollar bills. Find the value of x . **3**
11. Hector had y dollars in his savings account. He made a deposit of twenty-dollar bills and dollar coins. He had four times as many dollar coins as he had twenty-dollar bills and the total of his twenty-dollar bills was \$60. Write an expression for the balance in Hector's account after the deposit. **$y + 72$**

12. On September 1, Chris Eugene made the following band equipment purchases at Leslie's Music Store. Calculate her total bill. Complete a check for the correct amount. Print a copy of the check from www.cengage.com/school/math/financialalgebra. See additional answers.

DESCRIPTION	CATALOG NUMBER	LIST PRICE	QUANTITY	TOTAL
Speaker Cabinets	RS101	\$400.00	2	
Speaker Cabinets	RG306	\$611.00	2	
Horns	BG42	\$190.00	2	
Audio Console	LS101	\$1,079.00	1	
Power Amplifier	NG107	\$416.00	5	
Microphones	RKG-1972	\$141.92	8	
Microphone Stands	1957-210	\$32.50	8	
TOTAL				
13% DISCOUNT				
SALE PRICE				
8% SALES TAX				
TOTAL COST				

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Exercise 12
When reviewing this exercise, ask students if it would have made a difference if the 13% discount line and the 8% sales tax line had been switched on the equipment bill. Although it makes no difference in the total cost, this will be counterintuitive to many students. Show them that the switch will result in the same answer.

Exercise 13
Once again, it is important that students have a command of a credit (deposit) and a debit (a withdrawal). You might want to have students identify each before assigning this problem.

13. Create a check register for the transactions listed. There is a \$2.25 fee for each ATM use. See additional answers.
- Your balance on 10/29 is \$237.47
 - You write check 115 on 10/29 for \$18.00 to Fox High School.
 - You deposit a paycheck for \$162.75 on 10/30.
 - You deposit a \$25 check for your birthday on 11/4.
 - On 11/5, you go to a sporting event and run out of money. You use the ATM in the lobby to get \$15 for snacks.
 - Your credit card bill is due on 11/10, so on 11/7 you write check 116 to Credit USA for \$51.16.
 - Your sister repays you \$20 on 11/10. You deposit it.
 - You withdraw \$25 from the ATM to buy flowers on 11/12.
 - You deposit your paycheck for \$165.65 on 11/16.
 - You deposit a late birthday check for \$35 on 11/17.
14. Ridgewood Savings Bank charges a \$27 per check overdraft protection fee. On July 8, Nancy had \$1,400 in her account. Over the next four days, the following checks arrived for payment at her bank: July 9, \$1,380.15; July 10, \$670 and \$95.67; July 11, \$130; and July 12, \$87.60. How much will she pay in overdraft protection fees? How much will she owe the bank after July 12? **\$108; \$1,071.42**
15. 123 Savings and Loan charges a monthly fee of \$8 on checking accounts and an overdraft protection fee of \$33. Neela's check register showed she had a balance of \$456 when she wrote a check for \$312. Three days later she realized her check register had an error and she actually only had \$256. So she transferred \$250 into her checking account. The next day, her monthly account statement was sent to her. What was the balance on her statement? **\$153**

*use p. 119
to in Excel*