

## Credit Card Interest and Payments

Suppose that you buy an electronic keyboard and sound system for \$500 using a credit card. When you get your first monthly statement, the minimum payment is \$25. The minimum payment is either \$15 or 5% of your balance, whichever is greater. Interest is calculated at 1.8% per month. You pay the minimum each month.

You can examine the situation described above with a spreadsheet. Write cell formulas for row 3 of the spreadsheet.

	A	B	C	D	E	F	G
1	Month	Balance	Interest	Payment	New Balance	Total Interest	Total Paid
2	1	\$500.00	\$9.00	\$25.00	\$484.00	\$9.00	\$25.00
3	2	\$484.00	\$8.71	\$24.20	\$468.51	\$17.71	\$49.20
4	3	\$468.51	\$8.43	\$23.43	\$453.52	\$26.15	\$72.63

Month	$A3 = A2 + 1$	Increase the month by 1.
Balance	$B3 = E2$	balance from the previous month
Interest	$C3 = B3 \cdot 0.018$	1.8% of the month's balance
Payment	$D3 = B3 \cdot 0.05$	5% of the month's balance
New Balance	$E3 = B3 + C3 - D3$	Add the interest and subtract the payment.
Total Interest	$F3 = F2 + C3$	Add the month's interest to the previous total interest.
Total Paid	$G3 = G2 + D3$	Add the month's payment to the previous total.

### EXERCISES (answer Questions in your notebook)

- Create a spreadsheet for the situation in the Example.
  - In which month will the minimum payment first be \$15?
  - After how many months will the balance reach zero?
  - What is the total interest paid?
  - What is the total amount you will pay?
  - How many payments are required to reduce the balance to \$400?
  - Rewrite the right side of  $E3 = B3 + C3 - D3$  in terms of  $B3$ .
- Create a new spreadsheet for an account that charges 14.9% annual interest. Use a minimum payment of 10% or \$20, whichever is greater. What is the total interest paid for the keyboard and sound system?