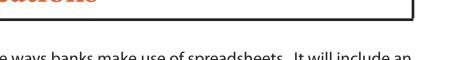
Financial Applications



This chapter looks at some of the ways banks make use of spreadsheets. It will include an electronic cheque book, a home loan simulator and a calculation of compound interest.

An Electronic Cheque Book

A spreadsheet can be used to allow a person to keep an accurate record of their financial dealings.

A Opening the Prepared Template

- 1 Load Microsoft Excel or close the current file.
- 2 Click on the OPEN icon in the QUICK ACCESS TOOLBAR or from within the FILE tab. Access the CHAPTER 18 folder of the EXCEL 2013 SUPPORT FILES and load the file:

Cheque Book

Selecting YES to the READ-ONLY dialogue box.

B Completing the Formulas

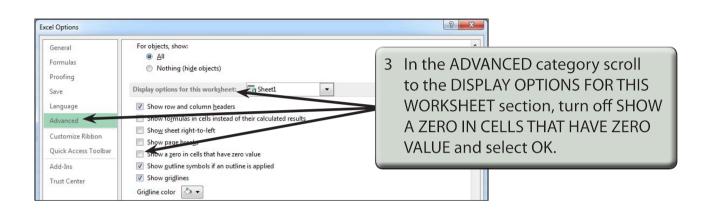
We need a formula that looks to see whether a deposit or withdrawal has been entered. If either has, then the deposit must be added to the balance or the withdrawal subtracted from the balance.

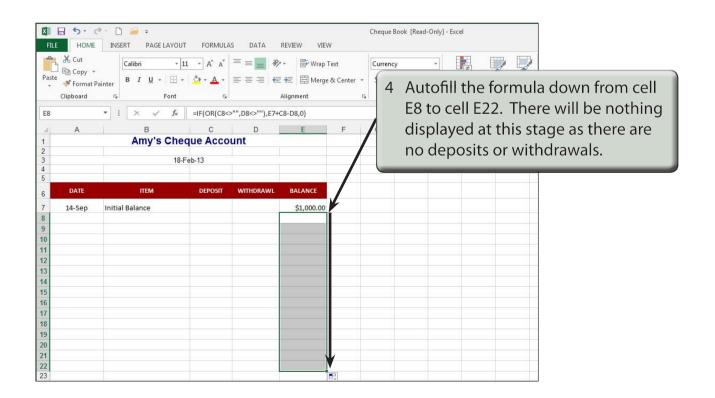
| FILE Paste | Cut | INSERT PAGE LAYOUT | REVIE) | 1 Enter the following formula in cell E8: = IF(OR(C8<>"",D8<>""),E7 + C8 - D8,0) | | | | | | | | |
|---------------|----------------------|--|---------|---|----------------------|---|---|--------|--------|-------------------------|--|--|
| ÷ E8 | V Format P Clipboard | ainter f_{2} Font \bullet f_{3} \bullet f_{3} | G. | ≡ ≡ ≡ € >"",D8<>""),E7+0 | Alignment | | 5 | Namber | 53 Com | n≓king + Tabl Styles | | |
| 2 | A | В | С | D | E | F | G | н | 1 | J | | |
| 1 2 | Amy's Cheque Account | | | | | | | / | | | | |
| 2 3 4 | | 18-F | eb-13 | | | | / | / | | | | |
| 5 | DATE | ITEM | DEPOSIT | WITHDRAWL | BALANCE | | | | | | | |
| 7 8 9 | 14-Sep | Initial Balance | | | \$1,000.00 \$0.00 | | | | | | | |

Chapter

NOTE: This formula says: "If either a deposit is entered in this row, OR a withdrawal is entered in this row, then display the previous balance (one row up) plus the deposit in this row minus the withdrawal in this row, otherwise display zero."

2 Zero values need to be turned off. Click on the FILE tab and select OPTIONS.





C Using the Cheque Book

Now you are ready to use the cheque account.

1 Enter the following labels and values into your worksheet (there is 1 deposit and 4 withdrawals):

| Date | ltem | Deposit | Withdrawal |
|--------|------------------------|----------|------------|
| 15 Sep | Supermarket | | \$39.50 |
| 21 Sep | Electricity Bill | | \$86.80 |
| 21 Sep | Rent | | \$475.00 |
| 24 Sep | Pay Day | \$870.00 | |
| 25 Sep | New dress from Katie's | | \$125.00 |

| XI | 5.0 | 🥙 🗋 🧀 🕫 | | | | | Cheque Book [Read-Only] - Excel | | |
|-------|----------------------|--|--------------|-----------|-------------|-----|--|--|--|
| FILE | HOME | INSERT PAGE LAYOUT | FORMULAS | DATA I | REVIEW VIEW | v | | | |
| P | Cut | Calibri - 11 | - A A | = = | • 📲 Wrap T | ext | Currency + | | |
| Paste | Format P | o _{ainter} B I <u>U</u> → <u></u> | <u>* A</u> • | ≡≡≡€ | 🚈 🗄 Merge | 8 2 | 2 The Balance should adjust after each | | |
| | Clipboard | G Font | 5 | 4 | Alignment | _ | entry. | | |
| D12 | | ▼ : × √ fx | 125 | | | | | | |
| 2 | A | В | С | D | E | F | G H I J | | |
| 1 | Amy's Cheque Account | | | | | | | | |
| 2 | | | | | | | | | |
| 3 | 18-Feb-13 | | | | | | | | |
| 4 5 | | | | | | | | | |
| 6 | DATE | ITEM | DEPOSIT | WITHDRAWL | BALANCE | | | | |
| 7 | 14-Sep | Initial Balance | | | \$1,000.00 | | | | |
| 8 | 15-Sep | Supermarket | | \$39.50 | \$960.50 | | | | |
| 9 | 21-Sep | Electricity Bill | | \$86.80 | \$873.70 | | | | |
| 10 | 21 spe | Rent | | \$475.00 | \$398.70 | | | | |
| 11 | 24-Sep | Pay Day | \$870.00 | | \$1,268.70 | | | | |
| 12 | 25-Sep | New dress from Katie's | | \$125.00 | \$1,143.70 | | | | |
| 13 | | | | | | | | | |

- 3 Try adding some more withdrawals and deposits of your own.
- 4 Save your workbook and print a copy if your teacher requires you to.

The Home Loan Simulator

Many banks have home loan tables set up so that prospective borrowers can be shown what their repayments will be. We can use Microsoft Excel to set up a loan simulator of our own. Such tables are called LOAN AMORTIZATION tables. For simplicity we will just create a table for monthly repayments.

A Opening the Prepared Template

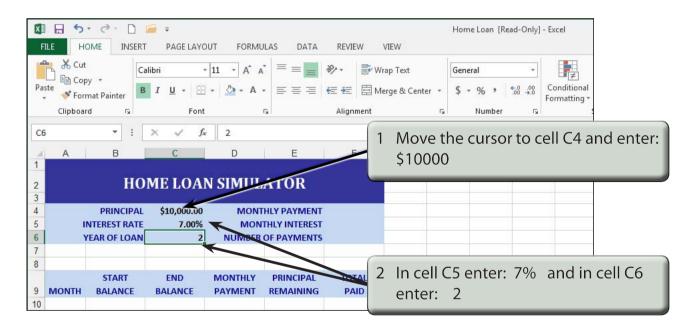
- 1 Close the current file and click on the OPEN icon in the QUICK ACCESS TOOLBAR or from within the FILE tab.
- 2 Access the CHAPTER 18 folder of the EXCEL 2013 SUPPORT FILES and load the file:

Home Loan

Selecting YES to the READ-ONLY dialogue box.

B Entering the Initial Values

The values in the PRINCIPAL, INTEREST RATE and YEARS OF LOAN section control the spreadsheet. They are the only values that need to be entered and the table will be set up so that when different values are entered the table automatically adjusts.



NOTE: For simplicity we will use a 2-year loan. Normally a home loan would be for a much higher Principal than this and be paid back over many more years.