

PROGRAMAÇÃO EM

MICROSOFT

EXCEL

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FACULDADE DE FARMÁCIA DA UNIVERSIDADE DE COIMBRA

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MÓDULO I



Objectivos

- O objectivo da acção de formação é a aquisição de capacidades de nível médio na introdução, processamento e apresentação de dados através do *Microsoft Excel*
- As potencialidades da folha de cálculo são exploradas a partir de problemas colocados e resolvidos nas sessões

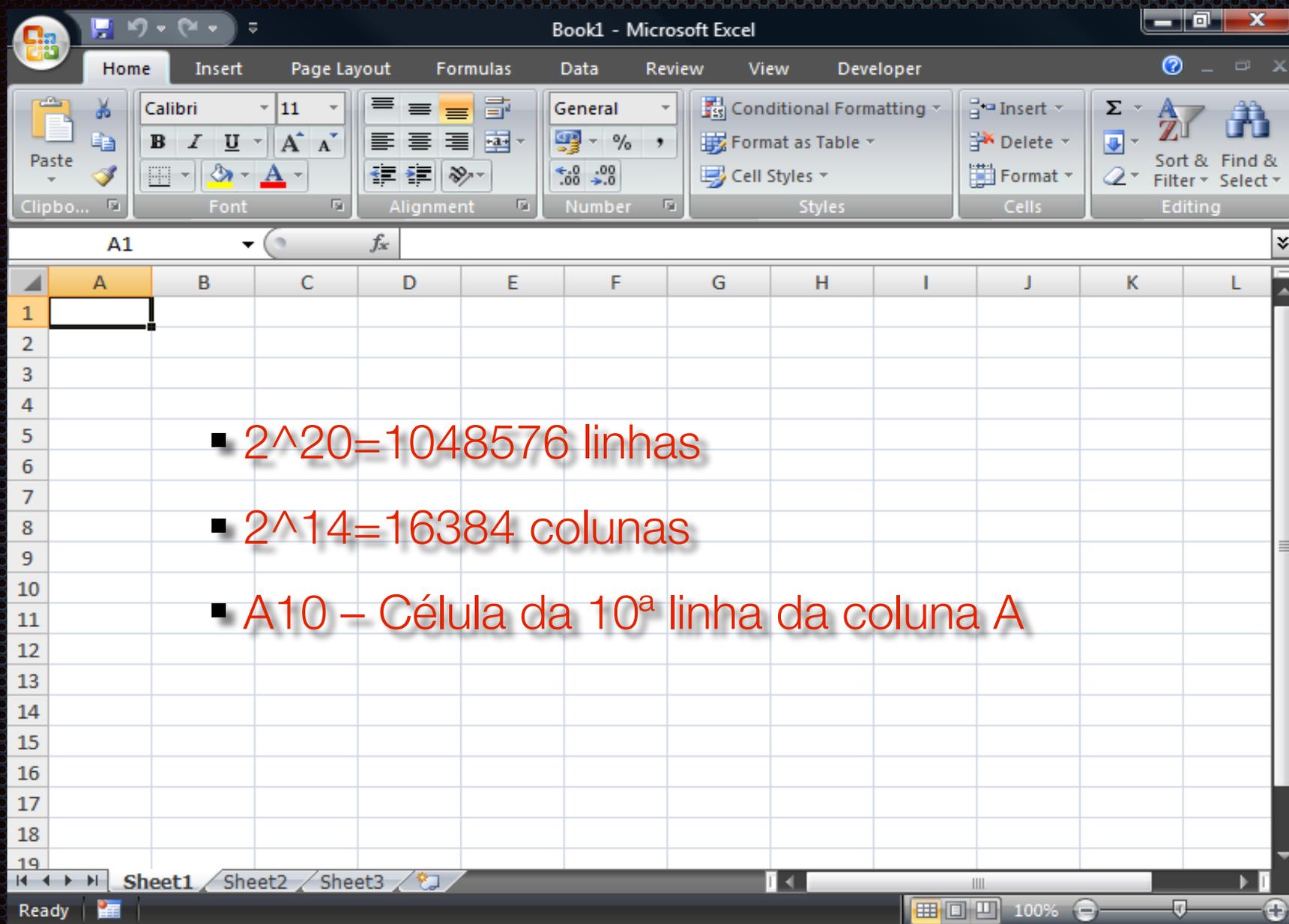
Bibliografia

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Contactos e Material de Apoio

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Folha de cálculo Excel

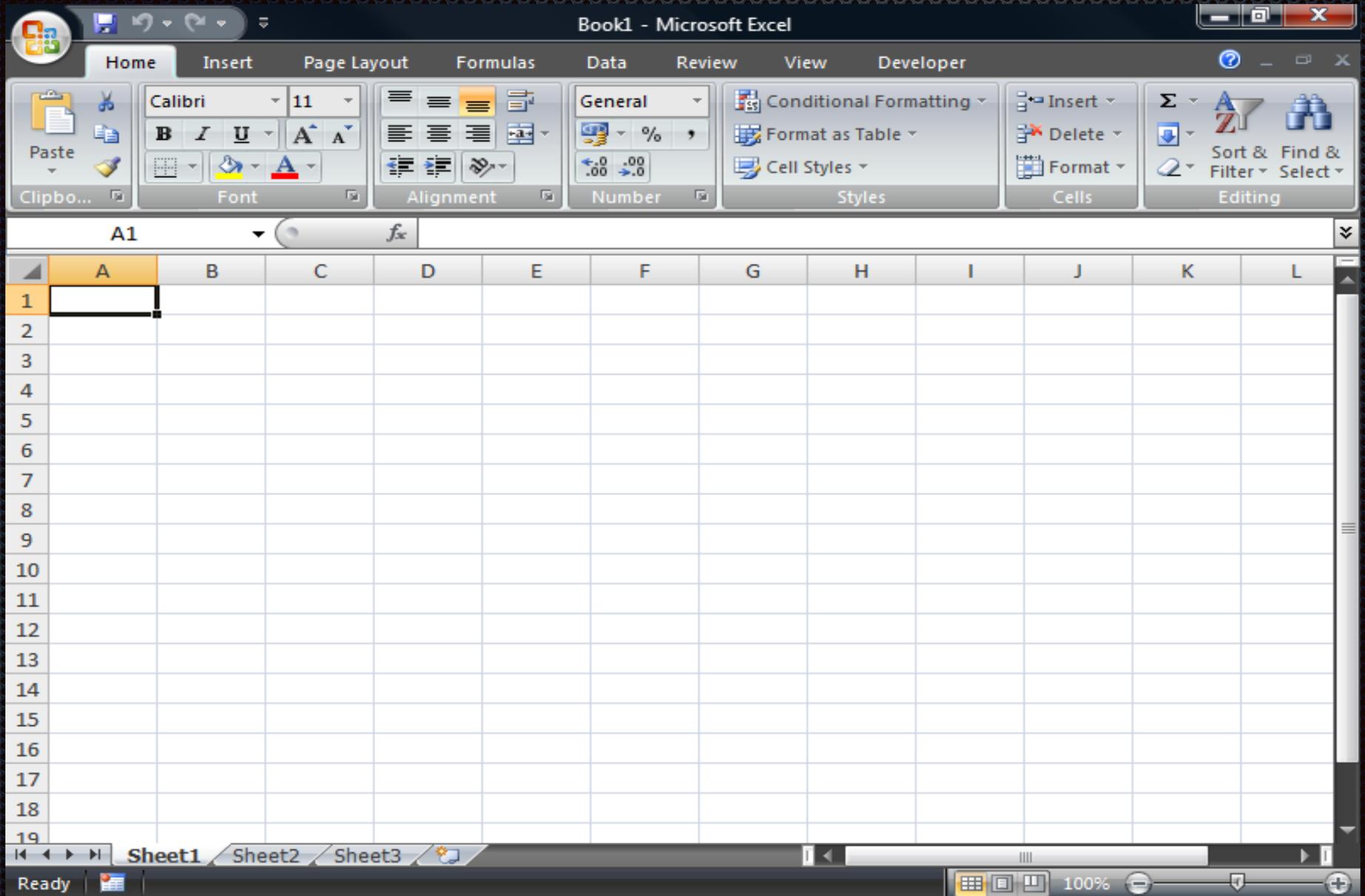


The image shows a screenshot of the Microsoft Excel application window. The title bar reads "Book1 - Microsoft Excel". The ribbon is set to "Home", and the "Font" group is active, showing "Calibri" font and size "11". The worksheet grid is visible, with columns labeled A through L and rows numbered 1 through 19. The cell A1 is selected. Overlaid on the grid is a list of three facts in red text:

- $2^{20} = 1048576$ linhas
- $2^{14} = 16384$ colunas
- A10 – Célula da 10ª linha da coluna A

The status bar at the bottom shows "Ready", "Sheet1", "Sheet2", "Sheet3", and "100%" zoom.

Menus e ferramentas associadas



Deslocações na folha de cálculo

- Deslocações para a célula acima, abaixo, à direita e à esquerda da célula activa:

utilizar as setas do teclado

- Deslocações para os extremos da folha de cálculo:

<Ctrl>+seta

Inserção de dados

- Activar a célula onde se pretende inserir os dados
- Inserir os dados na célula
- Concluir a inserção pressionando

<Enter>

ou uma das setas do teclado

Exercício 1.1

- Insira os valores seguintes na sua folha Excel:

The screenshot shows the Microsoft Excel interface with the following data in the spreadsheet:

	A	B	C	D	E	F	G	H	I	J	K	L
1	Consumos de electricidade em Coimbra (em Kwh/1000000)											
2	Anos	domésticos	industriais									
3	2000	180	338									
4	2001	185	323									
5	2002	191	209									
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												

The interface includes the ribbon with tabs for Home, Insert, Page Layout, Formulas, Data, Review, View, and Developer. The status bar at the bottom shows 'Ready', 'Folha1', 'Folha2', 'Folha3', and a zoom level of 100%.

Formatar célula

The image shows the Microsoft Excel interface with the 'Format' menu open over cell A1. The ribbon includes 'Home', 'Insert', 'Page Layout', 'Formulas', 'Data', 'Review', 'View', and 'Developer'. The 'Format' menu is expanded to show options for 'Cell Size', 'Visibility', 'Organize Sheets', and 'Protection'. The 'Cell Size' section includes 'Row Height...', 'AutoFit Row Height', 'Column Width...', 'AutoFit Column Width', and 'Default Width...'. The 'Visibility' section includes 'Hide & Unhide'. The 'Organize Sheets' section includes 'Rename Sheet', 'Move or Copy Sheet...', and 'Tab Color'. The 'Protection' section includes 'Protect Sheet...', 'Lock Cell', and 'Format Cells...'. The status bar at the bottom shows 'Ready', 'Sheet1', 'Sheet2', 'Sheet3', and '100%'.

Formatar célula e outras formatações

The image shows the Microsoft Excel interface with the 'Format Cells' dialog box open. The dialog box is titled 'Format Cells' and has several tabs: 'Number', 'Alignment', 'Font', 'Border', 'Fill', and 'Protection'. The 'Number' tab is selected. In the 'Number' tab, the 'Category' list on the left has 'Date' selected. The 'Type' list on the right shows several date formats, with '*14-03-2001' selected. The 'Locale (location)' dropdown is set to 'Portuguese (Portugal)'. The background shows a spreadsheet with column 'D' selected and a cell in row 7 highlighted with a thick border. The status bar at the bottom indicates 'Ready' and '100%' zoom.

Book1 - Microsoft Excel

Home Insert Page Layout Formulas Data Review View Developer

Paste Font Alignment Number Styles Cells Editing

Calibri 11

General

Conditional Formatting

Insert Delete Format

Sort & Filter Find & Select

D7

Format Cells

Number Alignment Font Border Fill Protection

Category:

- General
- Number
- Currency
- Accounting
- Date**
- Time
- Percentage
- Fraction
- Scientific
- Text
- Special
- Custom

Sample

Type:

- *14-03-2001**
- *quarta-feira, 14 de Março de 2001
- 14-03-2001
- 14-3-01
- 14-03-01
- 14-Mar
- 14-Mar-01

Locale (location):

Portuguese (Portugal)

Date formats display date and time serial numbers as date values. Date formats that begin with an asterisk (*) respond to changes in regional date and time settings that are specified for the operating system. Formats without an asterisk are not affected by operating system settings.

OK Cancel

Sheet1 Sheet2 Sheet3

Ready 100%

Exercício 1.1 (cont.)

- Utilizar as formatações anteriores para obter

The screenshot shows the Microsoft Excel interface with the following data table:

Consumos de electricidade em Coimbra (em Kwh/1000000)			
Anos	domésticos	industriais	
2000	180	338	
2001	185	323	
2002	191	209	

The spreadsheet is titled "exercicio11.xlsx" and is open in Microsoft Excel. The active cell is E7, which is currently empty and has a black border. The ribbon shows the Home tab with various formatting options like Font, Alignment, Number, Styles, Cells, and Editing. The status bar at the bottom indicates "Ready" and "100%".

Exercício 1.2

- Inserir na célula B2 a data de hoje

DD-MM-AAAA

- Apagar o data usando a tecla **** e inserir um número
- Explicar o sucedido

Exercício 1.3

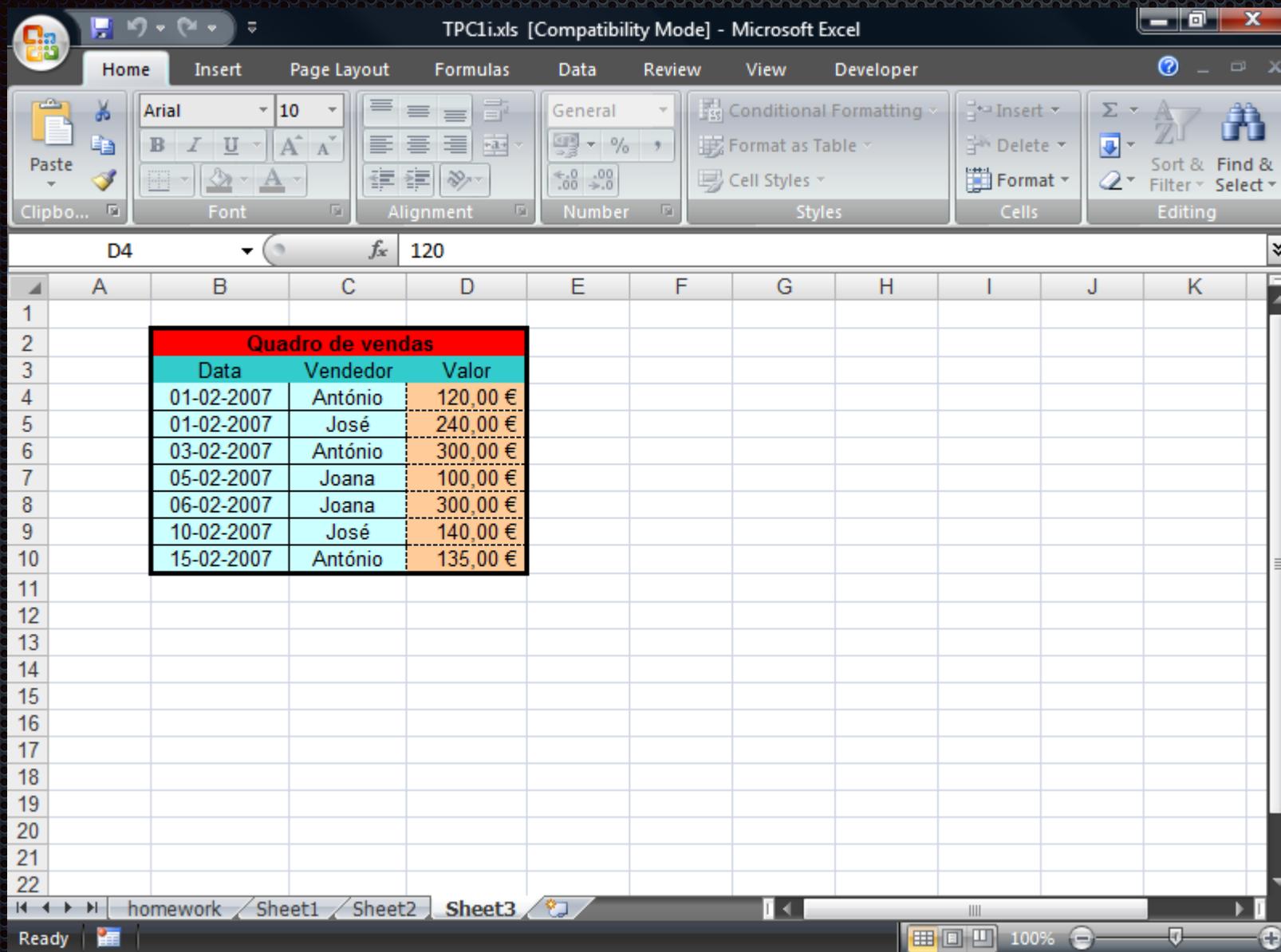
- Utilizar o ficheiro

vendedores.xlsx

- A partir da folha I, obter as folhas II e III a seguir apresentadas

Exercício 1.3

Folha III



The screenshot shows the Microsoft Excel interface with the following elements:

- File Name:** TPC1.xls [Compatibility Mode] - Microsoft Excel
- Active Tab:** Sheet3
- Formula Bar:** D4, fx, 120
- Table:** A table titled "Quadro de vendas" with the following data:

Quadro de vendas		
Data	Vendedor	Valor
01-02-2007	António	120,00 €
01-02-2007	José	240,00 €
03-02-2007	António	300,00 €
05-02-2007	Joana	100,00 €
06-02-2007	Joana	300,00 €
10-02-2007	José	140,00 €
15-02-2007	António	135,00 €

The interface includes the ribbon (Home, Insert, Page Layout, Formulas, Data, Review, View, Developer) and the status bar (Ready, 100% zoom).

Alça de preenchimento

The image shows the Microsoft Excel interface with the following details:

- File Name:** Book1 - Microsoft Excel
- Active Tab:** Home
- Font:** Calibri, size 11
- Number:** General
- Cell:** B2
- Formula Bar:** =repetir
- Worksheet:** Sheet1
- Content:** The word "repetir" is entered in cell B2 and copied down to cells B3 through B11.
- Context Menu:** A menu is open over the fill handle of cell B11, showing three options:
 - Copy Cells
 - Fill Formatting Only
 - Fill Without Formatting

Alça de preenchimento

The screenshot shows the Microsoft Excel interface with the following details:

- Title Bar:** Book1 - Microsoft Excel
- Menu Bar:** Home, Insert, Page Layout, Formulas, Data, Review, View, Developer
- Home Tab Ribbon:**
 - Clipboard:** Paste
 - Font:** Calibri, 11, Bold, Italic, Underline, Color, Background Color
 - Alignment:** Left, Center, Right, Justify, Indent, Decrease Indent, Increase Indent
 - Number:** General, Percentage, Decimals, Thousands Separator, Comma Separator
 - Styles:** Conditional Formatting, Format as Table, Cell Styles
 - Cells:** Insert, Delete, Format
 - Editing:** Sort & Filter, Find & Select
- Formula Bar:** B2, fx, 1
- Worksheet Grid:** Columns A-L, Rows 1-19. Cell B2 contains the value '1'. A fill handle is being used to copy this value down to cell B13.
- Context Menu:** Open over the fill handle, showing options: Copy Cells (selected), Fill Series, Fill Formatting Only, Fill Without Formatting.
- Status Bar:** Ready, Sheet1, Sheet2, Sheet3, Average: 1, Count: 12, Sum: 12, 100%

Séries e Listas

The image shows a screenshot of Microsoft Excel with two dialog boxes open. The background window is the 'Excel Options' dialog, with the 'Popular' tab selected. The 'Custom Lists' dialog is in the foreground, showing a list of custom lists and an 'Import' button.

Excel Options - Popular Tab:

- Formulas
- Proofing
- Save
- Advanced
- Customize
- Add-Ins
- Trust Center
- Resources

Custom Lists Dialog:

Custom Lists

Custom lists:

- NEW LIST
- Seg, Ter, Qua, Qui, Sex, Sáb, D
- Segunda-feira, Terça-feira, Qua
- Jan, Fev, Mar, Abr, Mai, Jun, Ju
- Janeiro, Fevereiro, Março, Abril,

List entries:

- Segunda-feira
- Terça-feira
- Quarta-feira
- Quinta-feira
- Sexta-feira
- Sábado
- Domingo

Press Enter to separate list entries.

Import list from cells:

Exercício 1.4

- Pretende construir-se uma folha para registo das presenças às sessões de formação
- Os nomes são colocados nas linhas
- As datas das sessões por colunas
- Posteriormente, completaremos esta folha com funções adequadas

Ordenação

The image shows the Microsoft Excel interface with the 'Data' tab selected. A range of cells in column B (rows 2-13) is selected, containing the letters A through K. The 'Sort' dialog box is open, showing the following configuration:

- Buttons: Add Level, Delete Level, Copy Level, Options...
- My data has headers:
- Sort by: Column B
- Sort On: Values
- Order: A to Z

The status bar at the bottom indicates 'Count: 12' and '100%' zoom.

Validação dos dados de entrada

The image shows the Microsoft Excel interface with the 'Data' tab selected. A range of cells (B3:F12) is selected. The 'Data Validation' dialog box is open, displaying the 'Settings' tab. The 'Validation criteria' section shows 'Allow:' set to 'Any value' (highlighted in blue) and 'Ignore blank' checked. The 'Apply these changes to all other cells with the same settings' checkbox is unchecked. The 'Clear All', 'OK', and 'Cancel' buttons are visible at the bottom of the dialog.

Book1 - Microsoft Excel

Home Insert Page Layout Formulas Data Review View Developer

Get External Data Refresh All Connections Properties Edit Links Sort Filter Clear Reapply Advanced Text to Columns Remove Duplicates Data Validation Consolidate What-If Analysis Group Ungroup Subtotal Outline

B3

A B C D E F G H I J K L

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19

Sheet1 Sheet2 Sheet3

Ready 100%

Resultado:

The screenshot shows the Microsoft Excel interface with the following data in the spreadsheet:

	A	B	C	D	E	F	G	H	I	J
1										
2	Nome	21-Fev	28-Fev	6-Mar	13-Mar	3-Abr	10-Abr	17-Abr	24-Abr	
3	Ana Margarida Alexandre	1								
4	Ângela Cruz	1								
5	Angélique Silva	1								
6	Jessica Santos	1								
7	João Cruz	0,5								
8	Karine Barbosa	1								
9	Luís Fonseca	0,5								
10	Ricardo Dias	1								
11	Rute Monteiro	1								
12										
13										
14										
15										
16										
17										
18										
19										
20										

A yellow callout box with a black border points to the empty cell at row 11, column I, containing the text: "Número entre 0 e 1".