

Spreadsheets: Working out your sums and calculations



The small print

Prerequisites

Time in the workshop is precious – it is an opportunity for you to interact with the workshop leader and other participants through questions and discussions and to share your experiences and concerns. To make the most of this time we sometimes ask you to carry out learning activities ahead of the workshop so that everyone comes into the class with the same basic knowledge. We keep this prior learning to a minimum and often make use of online videos. Online videos provided through LinkedIn Learning can be accessed free of charge by University members anytime, anywhere, through a browser or app.

Your course booking will tell you if any prior learning activity is required. If you don't have an environment where you can do this learning, you can come along to one of our LinkedIn Learning sessions. These are a quiet space where you can work through videos or other workshop resources.

If you arrive for a workshop without having done the prior learning, the workshop leader may suggest that you come back on another session.

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About the workshop designer

Tanya Prescott first started IT teaching in 2009 and has taught in many different FE settings. Tanya has extensive experience teaching Excel courses, in particular, and is always enthusiastic to help others discover the potential of Excel spreadsheets and how they really can make life easier.

Revision history

| Version | Date | Author | Comments |
|---------|----------------|------------------|----------------------------|
| 2.2 | January 2024 | Graham Addis | Changed presenter |
| 2.1 | December 2022 | Graham Addis | Update to latest template |
| 2.0 | May 2020 | Graham Addis | Convert to online format. |
| 1.3 | December 2019 | Graham Addis | Change course name |
| 1.2 | October 2019 | Graham Addis | Update workbook references |
| 1.1 | August 2019 | Duncan Young | Small print updates |
| 1.0 | September 2017 | Pamela Stanworth | |

About this workshop

A hands-on activity session to grow your confidence in devising and checking formulae in a spreadsheet.

If Excel formulae terrify you, this is your course!

We will include pointers to other workshops and further resources that will help you go on later to analyse and organise your data.

What you will learn

We will discuss how to create simple formulae, to carry out calculations in a spreadsheet. You will understand how formulae work in a spreadsheet, and how to correct or edit them.

You will gain experience at thinking through situations to set up formulae. We will explore a range of calculations and devise formulae to suit each one. We will look at ways to organise numerical data to enable efficient analysis.

What you need to know

The ideas and techniques covered in this workshop will apply to a range of tools. We will demonstrate using *Excel for Windows*, which is widely available. However, the concepts will be the same, whatever spreadsheet software you decide to use.

I will assume that you are reasonably confident in using the tool you have chosen to use to create your spreadsheets. With your chosen tool, you will need to be able to:

- Open, close, and save files
- Browse folders and drives
- Enter and edit text and numbers
- Move around the *Windows* screen using mouse or keyboard
- Navigate the commands and menus, using Help as necessary

If you need to review these activities, LinkedIn Learning is a great place to get guidance. There is an activity with relevant Molly videos in the IT Learning Portfolio: visit skills.it.ox.ac.uk/it-learning-portfolio and search for “Spreadsheets: Working out your sums and calculations (Activity)”.

The resources you need

Sample documents that you can use to experiment with will be made available, but you may like to bring along your own.

The resources for most workshops, including any pre-course activity, are in the IT Learning Portfolio: visit skills.it.ox.ac.uk/it-learning-portfolio and search for “Spreadsheets: Working out your sums and calculations”

Unless you have been told otherwise, in classroom workshops there will be a computer available for you to use with *Excel for Windows* installed.

You can use your own computer with your preferred app installed if you want to – just bear in mind that I am not an expert in every app (although I am sure that between us we will be able to sort out most problems!).

Learning Objectives

This workshop has the following learning objectives:

Learning Objective One - Find and open a spreadsheet

Learning Objective Two - Devise formulae for a range of situations

Learning Objective Three - Devise formulae for a range of situations - including functions

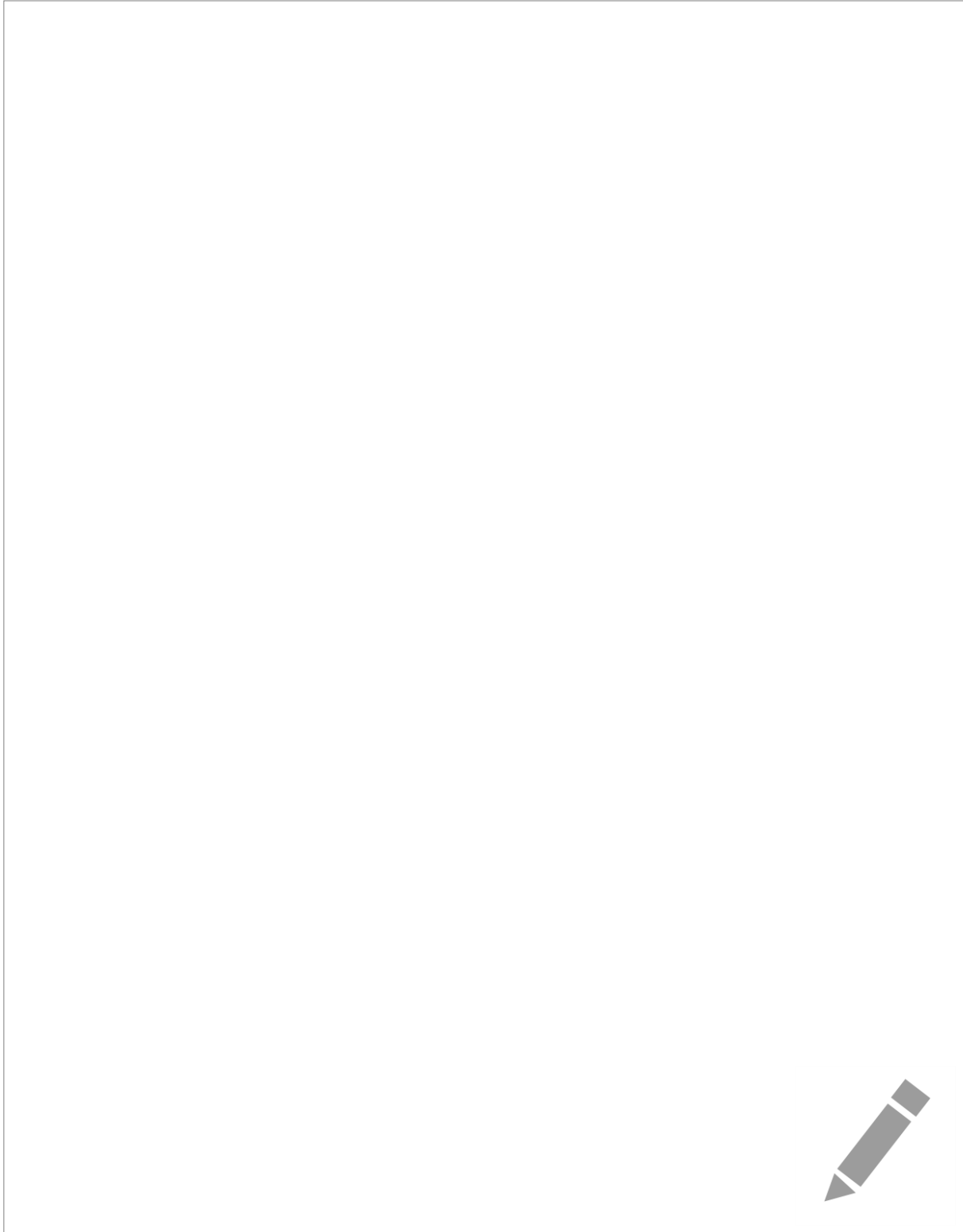
Learning Objective One - Find and open a spreadsheet

Start *Excel* with a plain workbook.

Look around the screen: explore some of the features, including the various tabs of the Ribbon and the Help button (usually at top right).

Choose **File->Open** and browse to the location of your exercise files

Find **formula writing activities.xlsx** and open the workbook.



Learning Objective Two - Devise formulae for a range of situations

Notice that this workbook has several worksheets (tabs along the bottom edge).

In workbook **formula writing activities.xlsx** you are going to try completing the tasks in on the following worksheets: **Task1, Task2, Task3**.

On each worksheet, read the text and try out the task described. Each has a situation, for which you are going to devise *Excel* formulae to carry out the calculations required.

Sample solutions are provided in corresponding worksheets in another workbook: **formula writing activities sample solutions.xls**.

Remember to save your edited workbook frequently, as you go along (for example using **File->Save**).



Learning Objective Three - Devise formulae for a range of situations – including functions

Notice that this workbook has several worksheets (tabs along the bottom edge).

In workbook **formula writing activities.xlsx** you are going to try completing the remaining tasks.

On each worksheet, read the text and try out the task described. Each has a situation, for which you are going to devise *Excel* formulae to carry out the calculations required.

Sample solutions are provided in corresponding worksheets in another workbook: **formula writing activities sample solutions.xls**.

Remember to save your edited workbook frequently, as you go along (for example using **File->Save**).



Further information

Getting extra help

The IT Learning Centre offers bookable clinics where you can get pre- or post-course advice. Contact us using courses@it.ox.ac.uk.

Learning Objective Four - Study Videos from LinkedIn Learning

On our website, you will find our collection of self-service courses and resources. This includes providing LinkedIn Learning video-based courses free to all members of the University. Visit skills.it.ox.ac.uk/linkedin-learning and sign in with your Single Sign-On (SSO) credentials.

Some courses recommend pre- and/or post-course activities to support your learning. You can watch the online videos anywhere, anytime, and even download them onto a tablet or smartphone for off-line viewing.

About the IT Learning Portfolio online

Many of the resources used in the IT Learning Centre courses and workshops are made available as Open Educational Resources (OER) via our Portfolio website at skills.it.ox.ac.uk/it-learning-portfolio.

Find the pre-course activity for this course in the IT Learning Portfolio: visit skills.it.ox.ac.uk/it-learning-portfolio and search for "Spreadsheets: Working out your sums and calculations (Activity)".

About the IT Learning Centre

The IT Learning Centre delivers over 100 IT-related teacher-led courses, which are provided in our teaching rooms and online, and we give you access to thousands of on-line self-service courses through Molly (powered by LinkedIn Learning).

Our team of teachers have backgrounds in academia, research, business and education and are supported by other experts from around the University and beyond.

Our courses are open to all members of the University at a small charge. Where resources allow, we can deliver closed courses to departments and colleges, which can be more cost-effective than signing up individually. We can also customize courses to suit your needs.

Our fully equipped suite of seven teaching and training rooms are usually available for hire for your own events and courses.

For more information, contact us at courses@it.ox.ac.uk

About IT Customer Services

The IT Learning Centre is part of the Customer Services Group. The group provides the main user support services for the department, assisting all staff and students within the University as well as retired staff and other users of University IT services. It supports all the services offered by IT Services plus general IT support queries from any user, working in collaboration with local IT support units.

The Customer Services Group also offers a data back-up service; an online shop; and a computer maintenance scheme. Customer Services is further responsible for desktop computing services – for staff and in public/shared areas – throughout UAS and the Bodleian Libraries.

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Resources for your learning

Activities for you to practice today

In the coursebook

Work at your own pace!

Be selective



Videos with today's topics in [LinkedIn Learning](#)

Follow-up work

Continue with exercises after the session

Bookable Course Clinics later

Course topics

Setting up worksheets
Entering data and text

Creating a formula
Adding up a column
Understanding formulae

More resources

Hands-on activities

Setting up a worksheet





Adding some data

Entering text and numbers

Type in a cell or in the formula bar

Right- or left-aligned?

Creating a formula



Creating a formula in a cell

Formula begins with =

Type or click cell references

Use arithmetic symbols

+ - * / ^

Press [Enter] or click



Working with formulae

Result appears in the cell

Formula shows in the formula bar

Cell contents or Result ?

[Esc] or  to start again



Updating values

New values recalculate!

Build more formulae that depend on these

Find the resources for this workshop in our IT Learning Portfolio

Download the files (and more) from the IT Learning Portfolio at

skills.it.ox.ac.uk/it-learning-portfolio

The screenshot shows the IT Learning Centre website. At the top, there is a dark blue header with the text "IT Learning Centre" and "For everyone in the University". Below the header is a navigation menu with links for "COURSES", "TEACHING ROOMS", "SERVICES", "EVENTS", "NEWS", and "ABOUT US". The main content area is titled "IT Learning Portfolio" and includes a welcome message, a search bar, and a list of resources. The resources are organized into a table with columns for Audience, Category, Software, and Resource. Each resource entry includes a brief description and a download icon (a small square with a white outline).

IT Learning Centre For everyone in the University

COURSES TEACHING ROOMS SERVICES EVENTS NEWS ABOUT US

IT Learning Portfolio

Learning resources - as used in our teaching

Welcome to the IT Learning Portfolio of self-service resources. Below you will find a range of resources that you can download and use to develop your IT digital skills for study, research and work. This search tool is currently under construction, and is likely to improve soon - please contact us if you can't find what you need.

Using the resources

Many of the resources described here are publicly viewable, and are open to all visitors. Some are Oxford-only and are only available for members of the University of Oxford who can log in. If you are asked to "login", give your University of Oxford Single Sign-On username and password.

The taught courses provided by the IT Learning Centre are usually open to members of the University to attend. Others can read about them but will not be able to book online for a place on a course. External visitors and alumni can sometimes pay to participate in a course - contact us to request details.

Contact us:
IT Learning Centre
Use our online contact form
Email us at itlearning@ox.ac.uk
Call us on 01865 272200 (option 2)

| Audience | Category | Software | Resource | Action |
|--|----------|----------|--|----------|
| 3D modelling: Kick-off AND Blender - Up and running (Activity) | | | Alter Effects: Animating texts and graphics (Activity) | Download |
| Apps for education (Activity) | | | AR/VR: Augmented Reality for mobile devices (Activity) | Download |
| AR/VR: Unity - a practical introduction (Activity) | | | AR/VR: Virtual Reality for desktop or mobile (Activity) | Download |
| Audacity - Recording your voice (Toolkit Activity) | | | Audacity: Recording the spoken word (Activity) | Download |
| Beginners IT: Making the most of single sign on (Course pack) | | | C++ - A comprehensive introduction (Course pack) | Download |
| Corpora - Why would I use a corpus (Toolkit Activity) | | | Create an online presence with WordPress (Activity) | Download |
| Data analysis: ATLAS.ti (Activity) | | | Data analysis: Introduction to working with statistics (Course pack) | Download |
| Databases: Building a database (Activity) | | | Databases: Building a database (Course pack) | Download |
| Databases: Concepts for project managers (Activity) | | | Databases: Concepts for project managers (Course pack) | Download |
| Databases: Concepts of database design (Activity) | | | Databases: Concepts of database design (Course pack) | Download |

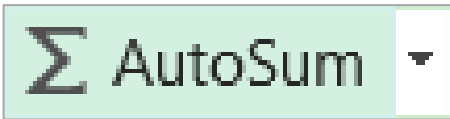
Practical Session 1

| Learning Objective | Workbook | Worksheet |
|--------------------|--|----------------------------|
| One | formula writing activities.xlsx | |
| Two | formula writing activities.xlsx | Task1, Task2, Task3 |

Adding up a column of data

Formula is like

=SUM(list of info)



| | A | B | C | D | E | F |
|----|------------------------------|-----------------------|---|---|---|---|
| 1 | Annual leave calcs | | | | | |
| 2 | | | | | | |
| 3 | | 15 days taken already | | | | |
| 4 | | 27 days allowed | | | | |
| 5 | | 12 days left | | | | |
| 6 | | 90 hours left | | | | |
| 7 | | | | | | |
| 8 | Hours worked in Trinity Term | | | | | |
| 9 | week 1 | 23 | | | | |
| 10 | week 2 | 28 | | | | |
| 11 | week 3 | 6 | | | | |
| 12 | week 4 | 25 | | | | |
| 13 | week 5 | 30 | | | | |
| 14 | week 6 | 25 | | | | |
| 15 | week 7 | 14 | | | | |
| 16 | week 8 | 20 | | | | |
| 17 | | 171 | | | | |
| 18 | | | | | | |

Practical Session 2

| Learning Objective | Workbook | Worksheet |
|--------------------|--|--------------------------|
| Three | formula writing activities.xlsx | (Remaining tasks) |

More help with spreadsheets



Other related courses

Spreadsheets:

Good Practice in spreadsheet design

Spreadsheets:

Dealing with that difficult spreadsheet

... and courses on charts, pivot tables, statistics functions, lookups and more

See the schedule online

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