



keycompetences

## Calculate the cost of starting a small business using an excel sheet

2021-1-DE02-KA220-  
ADU-000028281

Creating a new way of  
improving the key  
competencies of adults



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# PREFACE

- Finding a job is often difficult, especially for middle-aged people. The step towards self-employment is also an opportunity for refugees and migrants to create a job.
- The necessary legal, personal and professional qualifications can be found here: <https://www.make-it-in-germany.com/de/arbeiten-in-deutschland/existenzgruendung>
- An important aspect in planning a livelihood is the financial aspect. How much do I need to earn from my self-employment to be able to support myself and, if necessary, my family? It is essential that I clarify this aspect before I set up, so that successful planning is possible at all.
- An Excel spreadsheet helps me to calculate the costs and to update it with current figures.
- The figures we give are statistically calculated averages for Germany.

# AIMS and Objectives

By the end of the session you will be able to:

- Use the basics of Excel
- Calculate with formulas in Excel
- Use the spreadsheet to see how much money you need to earn to live on

# Using Microsoft Excel

To use Excel free of charge, you need a Microsoft account.

With your Microsoft account, you can log in to the site

<https://www.office.com> .

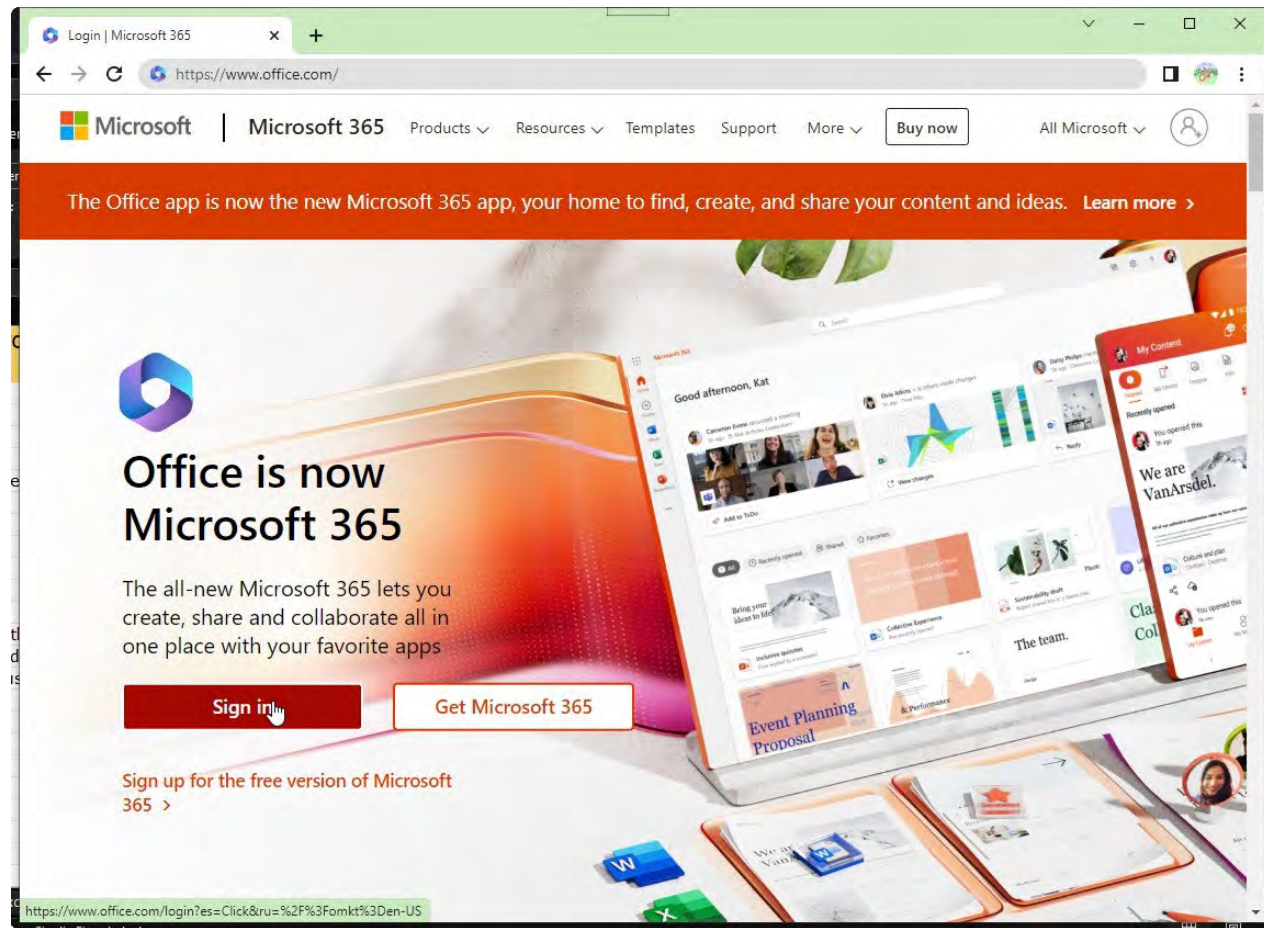
Then you can use the Microsoft Office products for free.

This will be explained in detail on the following pages.

# Using Microsoft Excel

Login or create a new Microsoft account

If you already have a Microsoft account, you can log in directly or register for a new account

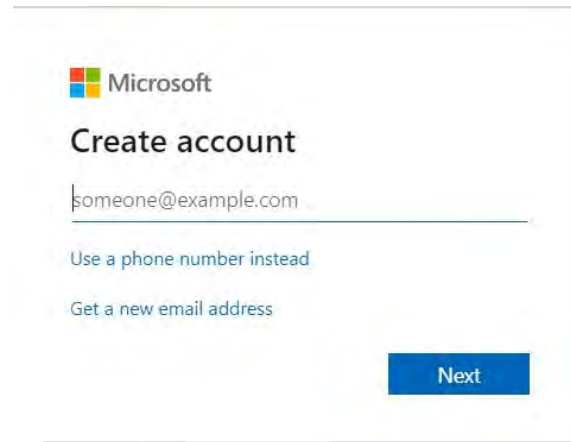


The screenshot shows the Microsoft 365 login page in a web browser. The browser's address bar displays "https://www.office.com/". The page features a navigation bar with the Microsoft logo, "Microsoft 365", and links for "Products", "Resources", "Templates", "Support", and "More". A "Buy now" button is also present. Below the navigation bar, a red banner reads: "The Office app is now the new Microsoft 365 app, your home to find, create, and share your content and ideas. Learn more >". The main content area has a large graphic of a laptop displaying the Microsoft 365 interface. The text on the page says: "Office is now Microsoft 365". Below this, it states: "The all-new Microsoft 365 lets you create, share and collaborate all in one place with your favorite apps". There are two buttons: a red "Sign in" button and a white "Get Microsoft 365" button. At the bottom, it says: "Sign up for the free version of Microsoft 365 >". The browser's address bar at the bottom shows the URL: "https://www.office.com/login?es=Click&ru=%2F%3Fomkt%3Den-US".

# Using Microsoft Excel

Create a new Microsoft account

If you need to re-register, you will need to provide an email address or phone number and then set your password.



Microsoft

## Create account

someone@example.com

[Use a phone number instead](#)

[Get a new email address](#)

Next



Microsoft

← someone@example.com

## Create a password

Enter the password you would like to use with your account.

.....

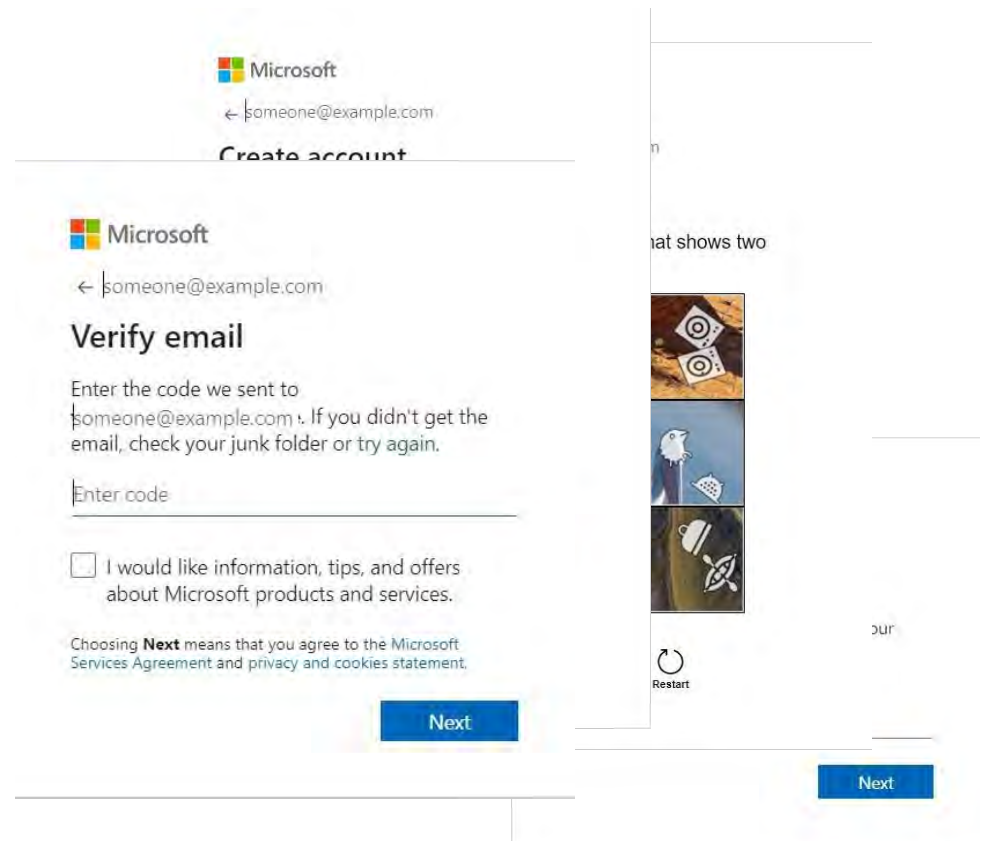
Show password

Next

# Using Microsoft Excel

Create a new Microsoft account

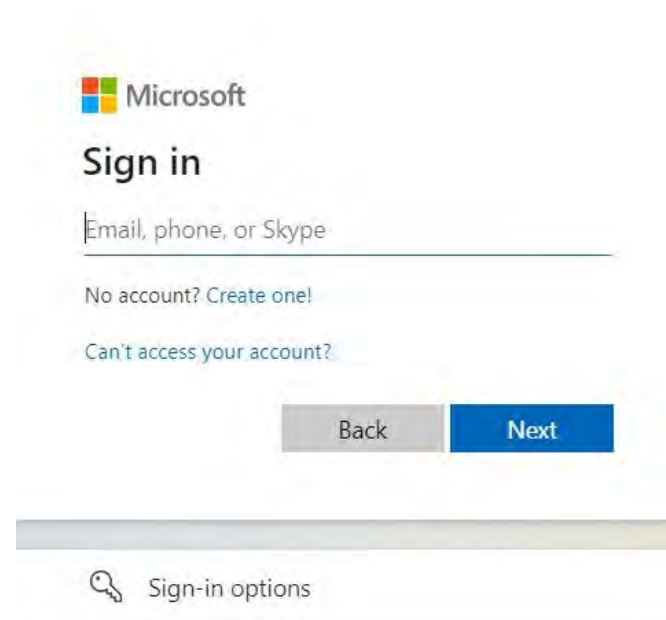
After you have entered your date of birth, you will receive a verification code via email or SMS. Once you have entered the and answered a few more questions, you will be taken to the Microsoft 365 Welcome page



# Using Microsoft Excel

Login with your Microsoft account

If you already have a Microsoft account, log in with your mail address/phone number and password and you will be taken to the Microsoft 365 welcome page



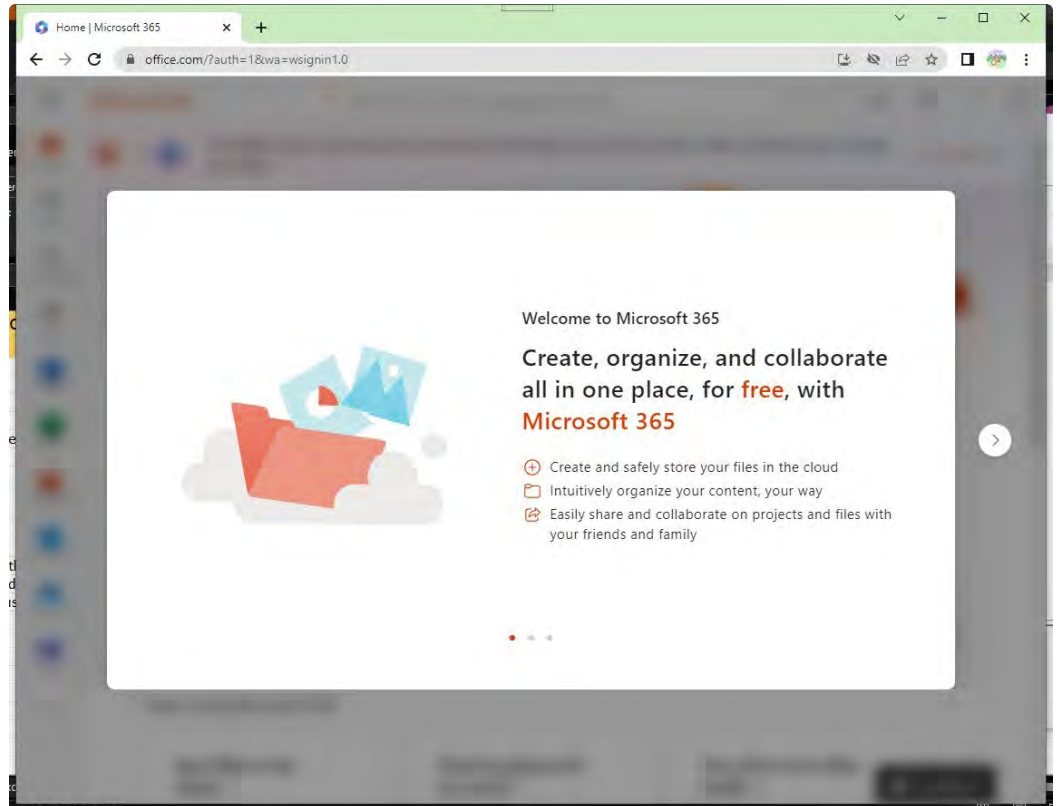
The screenshot shows the Microsoft sign-in interface. At the top left is the Microsoft logo. Below it is the text "Sign in". There is a text input field with the placeholder text "Email, phone, or Skype". Below the input field are two links: "No account? Create one!" and "Can't access your account?". At the bottom of the sign-in area are two buttons: "Back" and "Next". Below the sign-in area is a horizontal line, and below that is a search icon followed by the text "Sign-in options".



# Using Microsoft Excel

Login with your Microsoft account

You can read through the welcome pages and then close them with the check mark.

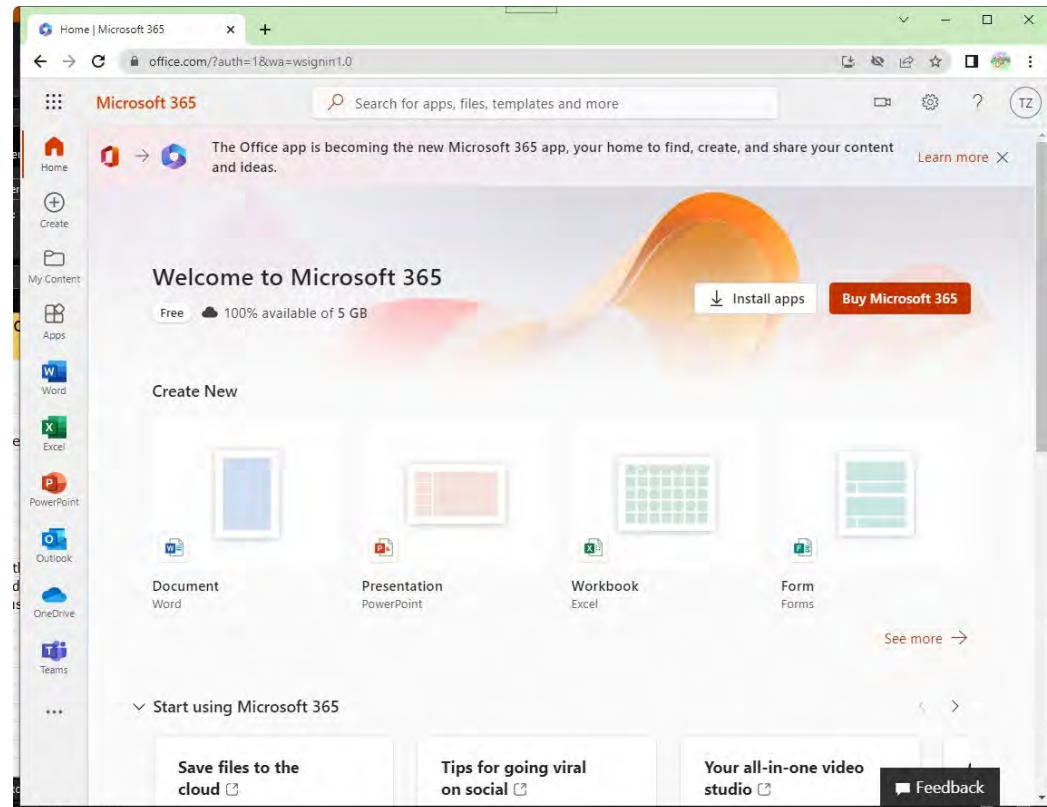


# Using Microsoft Excel

Starting with Excel

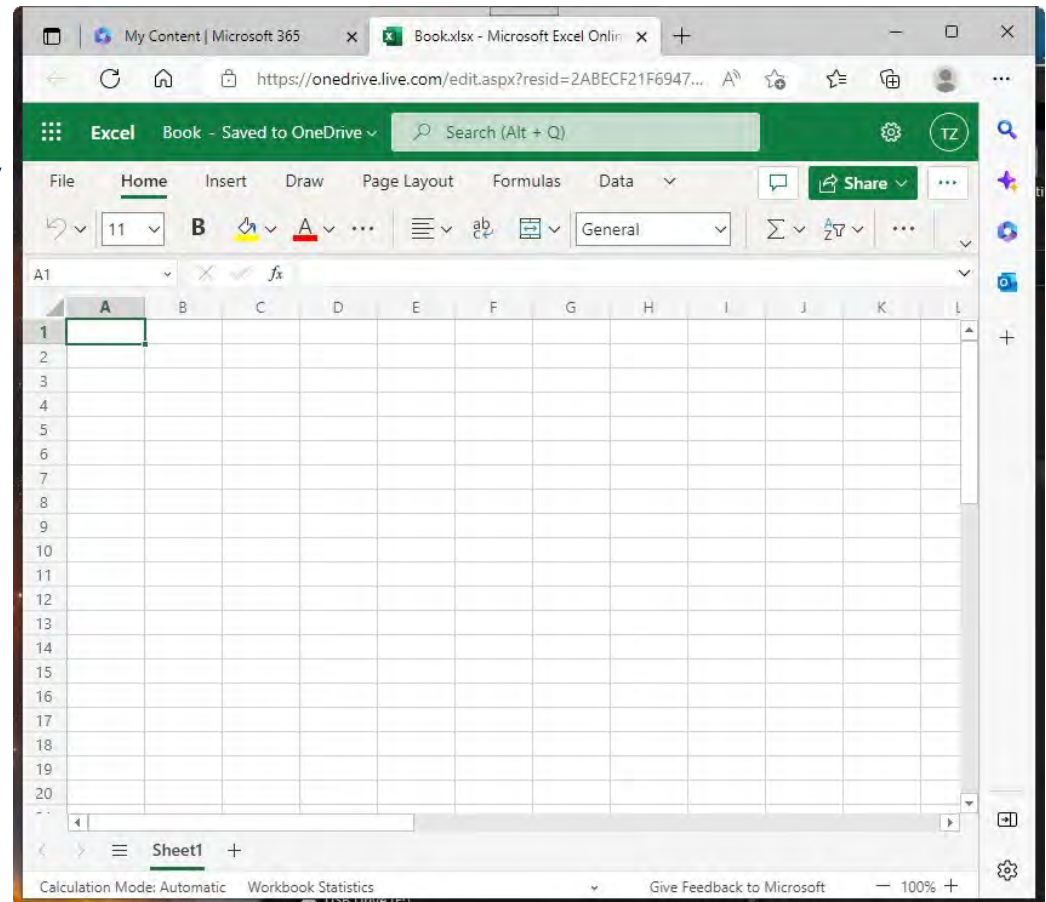
Now we're on the Microsoft 365 home page

Here we can create a new workbook that we will work with.



# Using Microsoft Excel

This table is used to enter the dates of this course and to test the functionality of Excel.



# Basic Thoughts

Before we can start the calculation, we need to know some important figures

- How many working days in a year
- How many hours a day can/would I work?
- How many hours do I work productively, i.e. how many of those hours do I earn money?
- What costs will I incur as a business owner?
  - office space
  - vehicle
  - fees
  - etc.

# Yearly Working Days

Nobody can work 365 days a year! So the first thing you need to know is how much time you have available for productive work. These figures are always calculated on an annual basis.

Of the working days we have

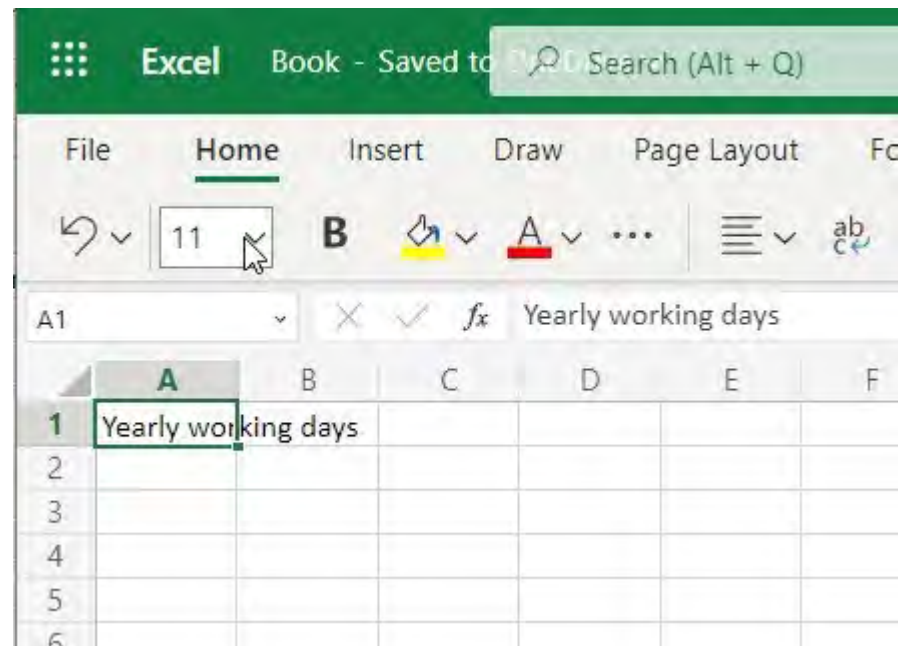
- Weekends
- Bank holidays
- Vacation
- Sick days
- Training days

We also have to take into account that we cannot always be working productively (i.e. billable to the client). For example, we have to write invoices or do other paperwork.

# Yearly Working Days

How a table is organized

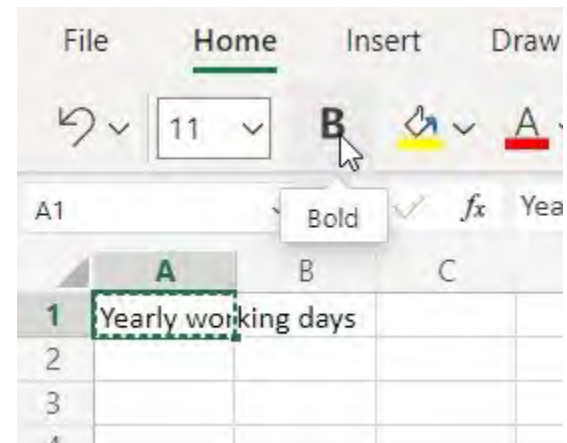
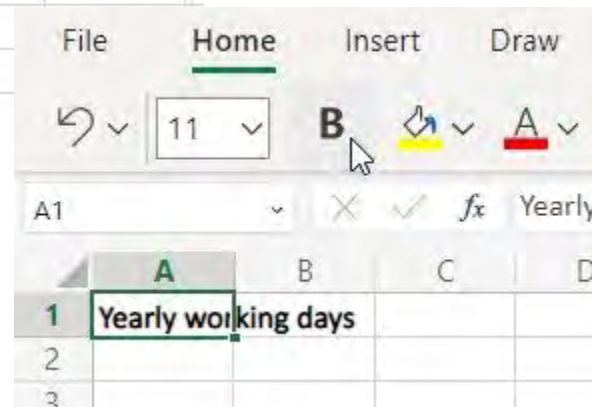
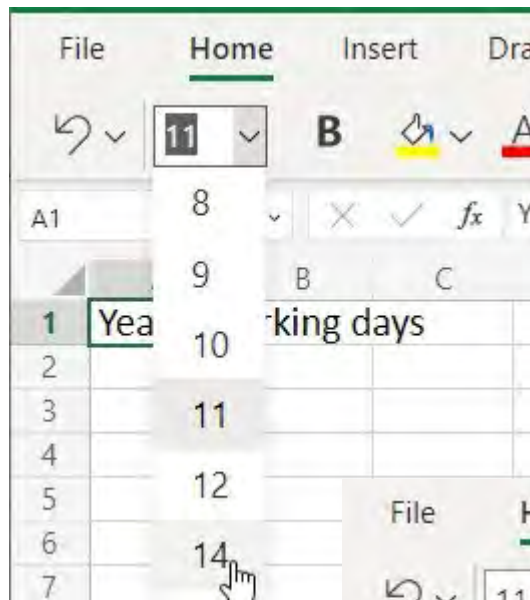
Let's start by calculating the possible working days. The cells in a spreadsheet are defined by their columns and rows. A spreadsheet program identifies columns with letters and rows with numbers. The first cell in the top left-hand corner is cell A1. In it we write the heading 'Working days per year'.



# Yearly Working Days

Creating a headline

To make the text recognisable as a heading, select the cell, change the font size to 14 and make it bold.

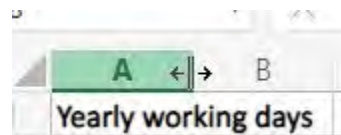


# Yearly Working Days

Insert the positions

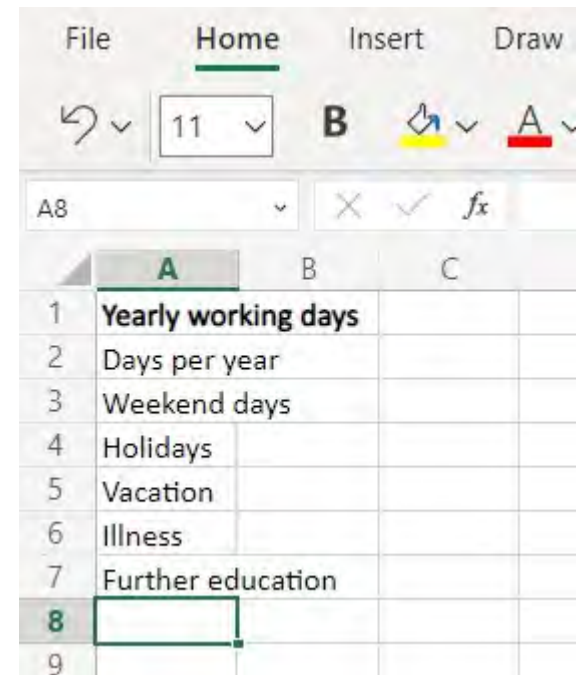
To calculate the number of working days, we need some information such as 'days per year', 'holidays', 'illness', etc. This is entered in column A.

Double click between columns A and B.



The width of column A is adjusted to fit its content.

	A	B
1	Yearly working days	
2	Days per year	
3	Weekend days	
4	Holidays	
5	Vacation	
6	Illness	
7	Further education	
8		
9		

A screenshot of the Excel interface showing the ribbon and a spreadsheet grid. The ribbon includes 'File', 'Home', 'Insert', and 'Draw'. The 'Home' ribbon is active, showing options for font size (11), bold (B), and text color (A). The spreadsheet grid shows columns A, B, and C, and rows 1 through 9. Column A contains the following text: 'Yearly working days', 'Days per year', 'Weekend days', 'Holidays', 'Vacation', 'Illness', and 'Further education'. Row 8 is highlighted in green, and a double-click cursor is positioned between columns A and B, indicating the process of adjusting the column width.

	A	B	C
1	Yearly working days		
2	Days per year		
3	Weekend days		
4	Holidays		
5	Vacation		
6	Illness		
7	Further education		
8			
9			



# Yearly Working Days

Insert the values

Next, we enter the appropriate information in column B. We use statistical averages for holidays, illness and training.

	A	B
1	<b>Yearly working days</b>	
2	Days per year	365
3	Weekend days	104
4	Holidays	13
5	Vacation	21
6	Illness	21
7	Further education	5
8		

# Yearly Working Days

Calculate the working days

The advantage of a spreadsheet spreadsheet is that we can enter calculations. When we type in a cell, we start our entry with with a '=', the program recognises that a mathematical formula is coming. For a calculation, we can refer directly to other cells to other cells. The '+' sign means addition. We are calculating the number of working days in a year.

	A	B	C	D
1	Yearly working days			
2	Days per year	365		
3	Weekend days	104		
4	Holidays	13		
5	Vacation	21		
6	Illness	21		
7	Further education	5		
8		=B2-B3-B4-B5-B6-B7		
9				

5	Vacation	21
6	Illness	21
7	Further education	5
8	Working days	201
9		

5	Vacation	21
6	Illness	21
7	Further education	5
8	Working days	201
9		

# Yearly Working Days

Calculate the working days

The advantage of this method is that the value of the calculation (in this case, working days) is automatically adjusted when the value in a cell changes. If I want to know how the number of sick days affects the number of working days, I can enter a different value and see the result immediately.

	A	B
1	<b>Yearly working days</b>	
2	Days per year	365
3	Weekend days	104
4	Holidays	13
5	Vacation	21
6	Illness	45
7	Further education	5
8		177

# Yearly Working Hours

Calculation of productive hours

First of all, we need to think about how many hours a day we want to work and enter them in the table.

7	Further education	5
8	Working days	201
9		
10		
11	Daily working hours	8
12	Yearly working hours	=B8*B11
13		

8	Working days	201
9		
10		
11	Daily working hours	8
12	Yearly working hours	1608

5	vacation	21
6	Illness	21
7	Further education	5
8	Working days	201
9		
10		
11	Daily working hours	8
12		

If we multiply the annual working days by the hours using a formula in cell B12, we get the hours we work in a year. The '\*' is in a multiplication formula.

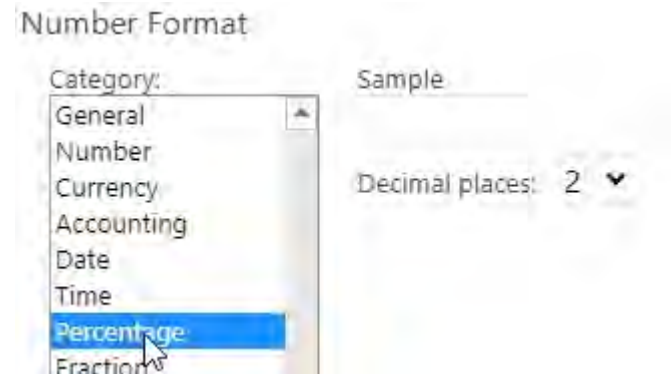
# Yearly Working Hours

Calculation of productive hours

Statistically, 66% of a self-employed person's working time in Germany is billable. To enter this value in Excel, right-click on cell B13 and select 'Number format'.

11	Daily working hours		New Note
12	Yearly working hours	160	Number Format...
13	Productivity factor		Hyperlink...
14			

In the dialog we select 'Percentage' and click on 'Ok'



# Yearly Working Hours

Calculation of productive hours

Now we can enter the number 66 and get the display and the value automatically in percent.

We now obtain our productive hours by multiplying the cells B12 and B13.

7	Further education	3
8	Working days	201
9		
10		
11	Daily working hours	8
12	Yearly working hours	1608
13	Productivity factor	66%
14		

11	Daily working hours	8
12	Yearly working hours	1608
13	Productivity factor	66.00%
14	Productive hours	=B12*B13
15		

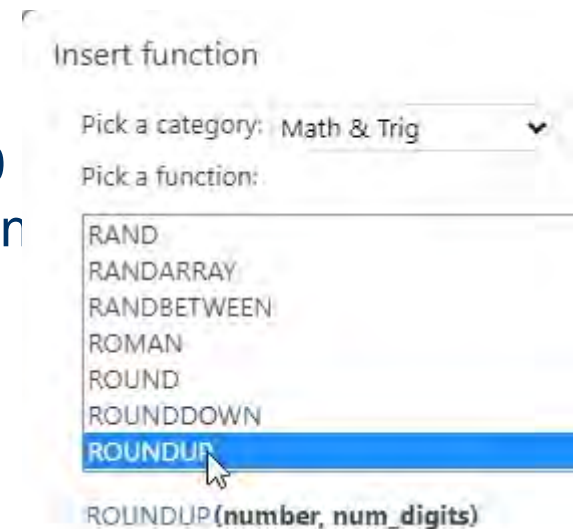
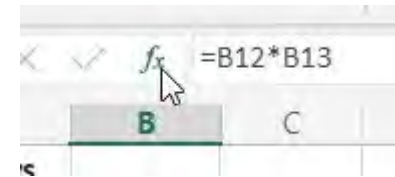
11	Daily working hours	8
12	Yearly working hours	1608
13	Productivity factor	66.00%
14	Productive hours	1061.28
15		

# Yearly Working Hours

Calculation of productive hours

Since we do not want to continue calculating with started hours, we round up the hours. To do this, we click on the function button in the text bar.

We select 'Math & Trig' and the 'ROUNDUP' function and enter our formula and the value 0 as the number of decimal places in the function



11	Daily working hours	8
12	Yearly working hours	1608
13	Productivity factor	66.00%
14	Productive hours	=ROUNDUP(B12*B13, 0)
15		

This is how Excel calculates the rounded value.

12	Yearly working hours	1608
13	Productivity factor	66.00%
14	Productive hours	1062

# Monthly costs

For the purposes of our calculation, we will assume an online shop selling home-made products. To find out what we need to do with this, we first need to think about the monthly costs.

- Rent
- Service charges
- Electricity costs
- Internet presence incl. shop
- Telephone charges
- Insurance costs
- Accounting costs
- Tax office
- GEZ
- CHAMBER OF COMMERCE
- Pension provision
- Health/nursing care insurance
- Bank charges
- Postage and packing

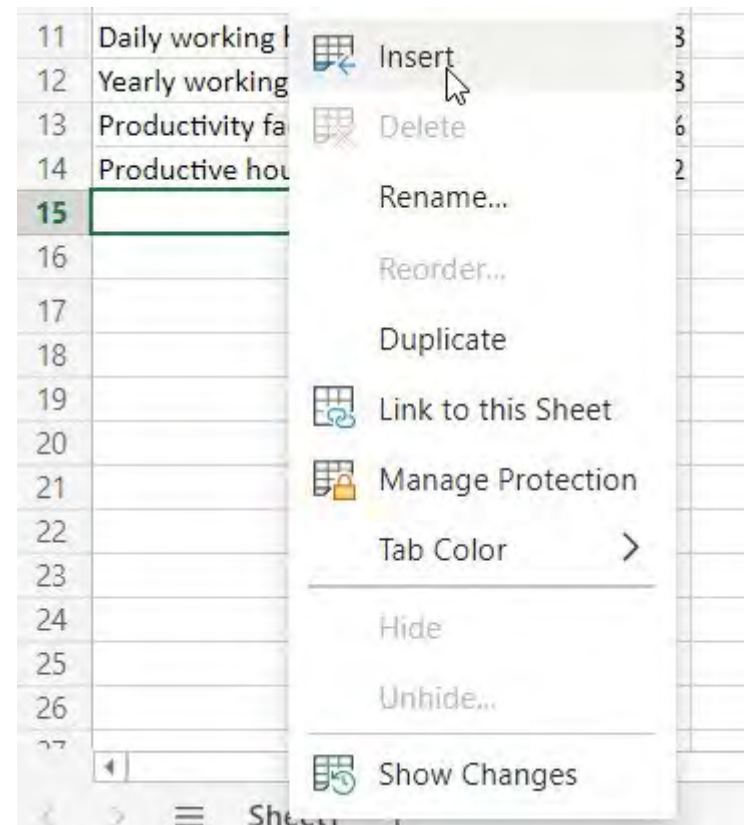
Then there is the salary I would like to pay myself.



# Monthly costs

Insert data

If we right-click on 'Sheet 1' below, we can insert a new table for this data.



# Monthly costs

Insert date

We will enter our data in this new table. Health and nursing care insurance in Germany depends on income. The percentage is currently 18.95%. We can express this dependency directly in a formula.

13	Banking fees	20
14	Postage	100
15	Desired Salary	4100
16	Health-/Nursing Care Insurance	=B15*18.95%
17		

	A	B	C
1	<b>Monthly Costs</b>	Monthly	Yearly
2	Rent	600	
3	Incidentals	150	
4	Power	110	
5	Internet/Online-Shop	200	
6	Phone	150	
7	Insurances	100	
8	Book keeping	50	
9	Tax Accountant	200	
10	Redio Fees (GEZ)	15	
11	IHK	100	
12	Pension Scheme	300	
13	Banking fees	20	
14	Postage	100	
5	Desired Salary	4100	
6	Health-/Nursing Care Insurance		

# Monthly/Yearly costs

Calculate the sum of the monthly costs

At the end of the day, we are interested in the annual amount we have to earn with our business.

To do this, we enter another formula in cell C2. Then

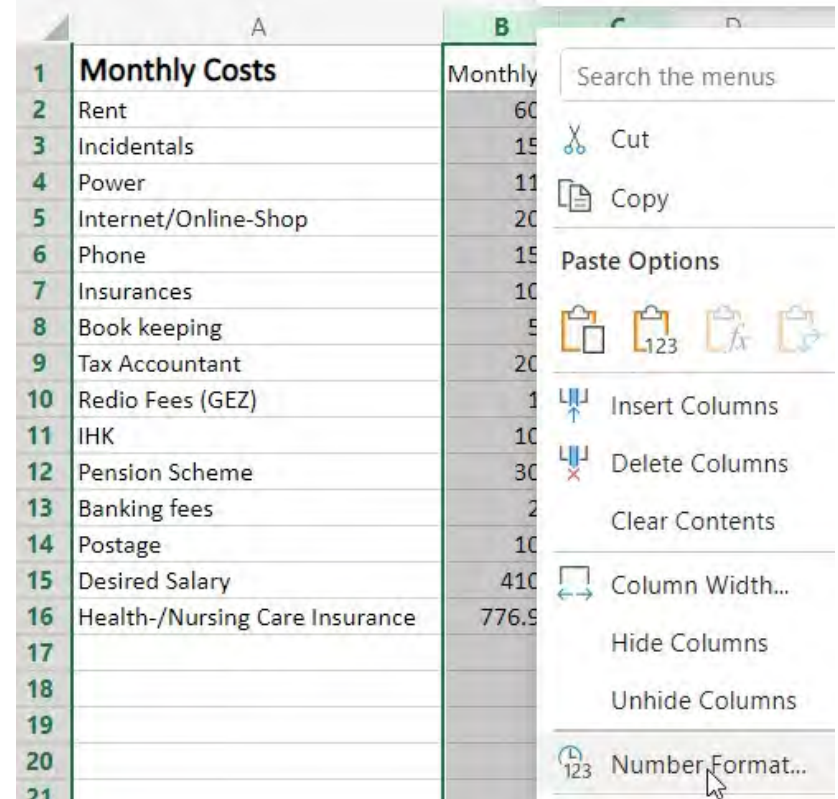
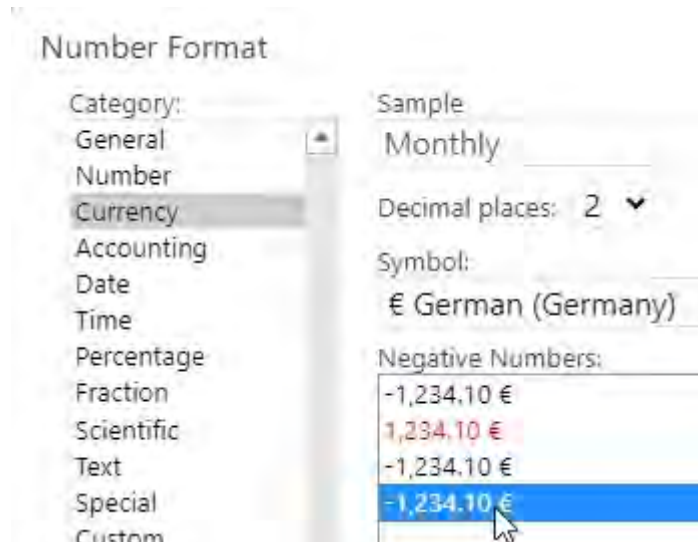
Let's copy the contents of the cell using the 'CTRL-C' key combination. We select cells C3 to C16 by clicking on cell C3, holding down the key and moving the mouse to cell C16. We then release the mouse button and press 'CTRL-V'. The contents of C2 are copied to all cells and the line information is automatically adjusted.

	A	B	C
1	<b>Monthly Costs</b>	Monthly	Yearly
2	Rent	600	=b2*12
3	Incidentals	150	
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			

# Monthly/Yearly costs

Calculate the sum of the monthly costs

We highlight columns B and C and change the numerical format to show € amounts directly.



# Monthly/Yearly costs

Calculate the sum of the monthly costs

We type the formula SUM(B2:B16) in cell B17 and can copy it to cell C16 using the 'CTRL-C' and 'CTRL-V' key combinations. The column information is automatically adjusted so that we get the sum of the cells above each other.

range	776.95 €	9,323.40 €
	6,971.95 €	83,663.40 €


	A	B	C
1	<b>Monthly Costs</b>	Monthly	Yearly
2	Rent	600.00 €	7,200.00 €
3	Incidentals	150.00 €	1,800.00 €
4	Power	110.00 €	1,320.00 €
5	Internet/Online-Shop	200.00 €	2,400.00 €
6	Phone	150.00 €	1,800.00 €
7	Insurances	100.00 €	1,200.00 €
8	Book keeping	50.00 €	600.00 €
9	Tax Accountant	200.00 €	2,400.00 €
10	Redio Fees (GEZ)	15.00 €	180.00 €
11	IHK	100.00 €	1,200.00 €
12	Pension Scheme	300.00 €	3,600.00 €
13	Banking fees	20.00 €	240.00 €
14	Postage	100.00 €	1,200.00 €
15	Desired Salary	4,100.00 €	49,200.00 €
16	Health-/Nursing Care Insurance	776.95 €	9,323.40 €
17		=SUM(B2:B16)	

# Hourly income

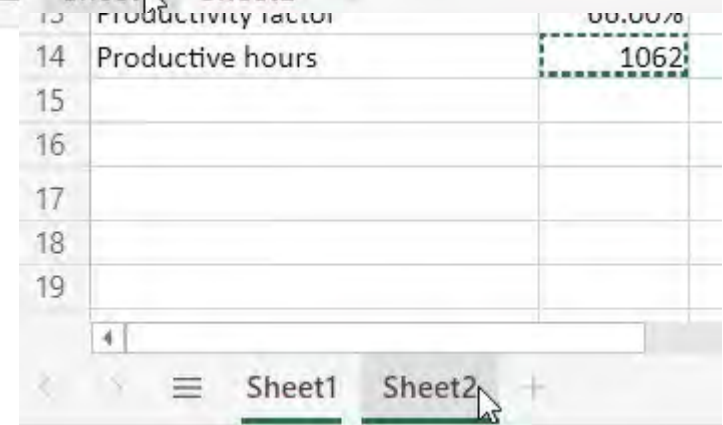
Now we want to know how much we need to earn per hour to achieve this income.

We need to divide the planned annual turnover by the number of productive hours. To do this, we insert a formula into cell C19. While typing, we can switch to the 'Sheet1' table,

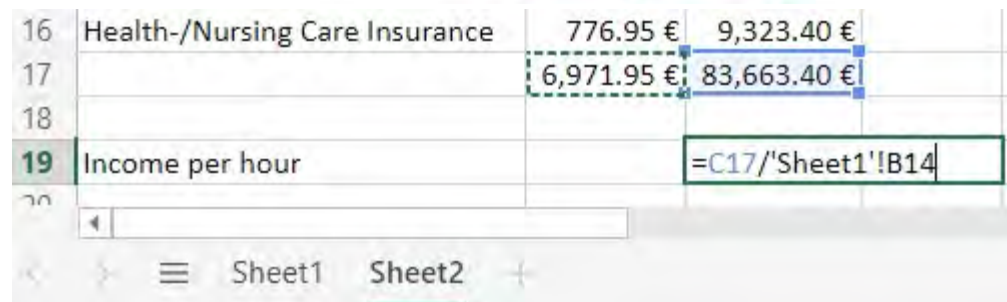
Select cell B14 and switch back



16	Health-/Nursing Care Insurance	776.95 €	9,323.40 €
17		6,971.95 €	83,663.40 €
18			
19	Income per hour		=C17/



13	Productivity factor	00.00%
14	Productive hours	1062
15		
16		
17		
18		
19		



16	Health-/Nursing Care Insurance	776.95 €	9,323.40 €
17		6,971.95 €	83,663.40 €
18			
19	Income per hour		=C17/'Sheet1'!B14



# Hourly income

How I reach this calculated hourly wage is calculated from the time I need to produce my products , the cost of materials and the selling price I can achieve. All this can be calculated in another table.

15	Desired Salary	4,100.00 €	49,200.00 €
16	Health-/Nursing Care Insurance	776.95 €	9,323.40 €
17		+	6,971.95 €
18			
19	Income per hour		78.78 €
20			

# Conclusion

With a spreadsheet it is very easy to calculate the costs of a business.

It gives me a quick overview of the company's income and expenses, and it's easy to see where I need to make changes to achieve my goals.