A spreadsheet to convert binary

Spreadsheets are really good for doing calculations

1. Open **Excel** and create a **new spreadsheet**
2. In cell **A1** type the title: **Binary convertor**
3. Click in cell **A3**
4. Enter the values shown in cells **A3** to **H3**. These are the column headings

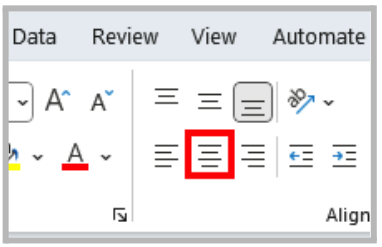
	A	B	C	D	E	F	G	H
1	Binary convertor							
2								
3	128	64	32	16	8	4	2	1
4								

5. Click in cell **A4**
6. Type a 1 in each of the cells from A4 to H4

   This is the binary number 11111111 – the largest 8-bit binary number possible

3	128	64	32	16	8	4	2	1
4	1	1	1	1	1	1	1	1
5								

7. Centre all the numbers from **A3** to **H4**
   a. **Highlight** the cells (A3 to H4)
   b. Use the **centre button** on the ribbon



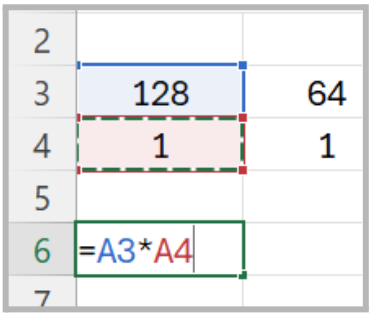
Adding a formula

8. Click in cell **A6**
9. Type the formula: **=A3*A4**

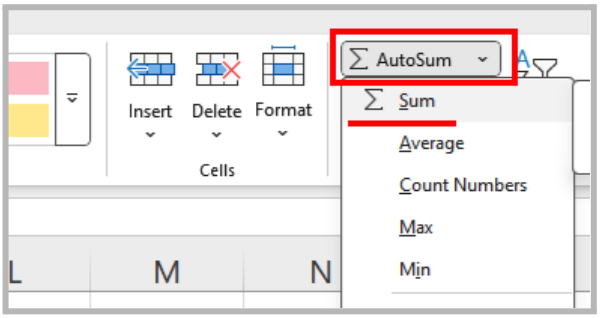
   This formula **multiplies** whatever is in cell A3 (which should be 128) by whatever is in cell A4 (which is 1)
10. Press **Enter**. The answer to the calculation should appear (it should be 128)

    If it doesn't work, check you typed the equals sign first
11. **Repeat** this for each of the columns

    So, in cell **B6** type the formula: **=B3*B4** and so on…

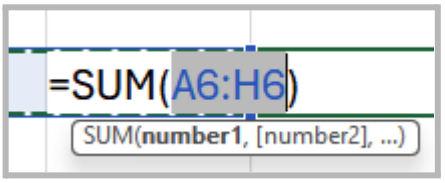


Calculating the answer



12. Click in cell **I6**
13. At the top, find the **Autosum** button on the ribbon. Press it and then choose **Sum** from the list

    This will enter a **function** in cell I6. It should say: **`=SUM(A6:H6)`**



    Excel has made a guess as to what cells you want to add up. Sometimes you have to correct it by highlighting the right cells

14. Press **Enter**

    This should put the answer in cell I6 (which should be 255)

15. **Format** cell **I6** so that the answer is **bold** and **red**
16. **Centre** any cells with a number in that aren't already centred. Use the centre button on the ribbon

17. **Change** cells **A4** to **H4** to be the binary number 10011001

    The answer should change

You can use this spreadsheet to convert any binary number really quickly

Converting from a normal number to binary

This is harder to do. But excel has a function we can use…

1. Click in cell **A10**
2. Type a number between 0 and 255 (I used **35**)
3. Click in cell **C10**. Type the function:
   `=BASE(A10,2)`
4. Press **Enter**

This should convert the number

5. To get the number as an 8-bit number change the function to be
   `=BASE(A10,2,8)`

To change the function, click in the function bar above the column headers