

Google Sheet / Excel basic 基本試算表

<https://sheet.new>

Row 行 1,2,3,4...

Column 欄 A,B,C,D,...

Cell 儲存格

Address 位址 D22

Range 範圍 J2:J11

drop-down list

1. 插入：下拉式清單(指定範圍)
 2. 名單排序
 3. countif 計次數
 4. share 共享
 5. comment 留言

套用至範圍 'B2:H6'

準則 下拉式選單 (指定範圍)

= '!'\$J\$2:\$J\$11

Ann

Ben

移除規則 完成

A2:C7

寫出以下範圍(包含數字 4)的試算表地址： Range of cells which includes digit "4"

	A	B	C	D	E	F	G	H	I
1				4	4	4	4	4	
2	1	1	1	4	4	4	4	4	
3	1	1	1	4	45	45	45	45	5
4	1	1	13	34	345	45	45	45	5
5	1	12	123	234	2345	245	45	45	5
6	1	12	123	234	2345	245	45	45	5
7	1	12	123	23	235	25	5	5	5
8		2	23	23	235	25	5	5	5
9			3	3	35	5	5	5	5

https://youtu.be/lyOkEmFqmHU?list=PLQutejmQFO79bNfuHGDI4d-wZ2rr_h0&t=50

MS Excel (1)

Food Supply 食品供應

Local Consumption of Major Fresh Food Produce

本地消耗的主要鮮活食品

http://www.afcd.gov.hk/tc_chi/agriculture/agr_fresh/agr_fresh_fur/agr_fresh_fur.html

https://www.afcd.gov.hk/english/agriculture/agr_fresh/agr_fresh_fur/agr_fresh_fur.html

	A	B	C	D	E	F	G
1	Local Consumption of Major Fresh Food Produce						
2	food 食物 (tonnes 公噸)	2023	2022	2021	2020	2019	2018
3	Vegetables 蔬菜	2,288	2,136	2,605	2,588	2,361	2,310
4	Fruits 鮮果	1,530	1,585	1,858	1,702	1,863	1,889
5	marine fish 海魚	286	291	301	260	241	257
6	fresh eggs 蛋品	409	354	375	371	370	350
7	freshwater fish 淡水魚	126	123	149	164	151	153
8	live poultry 家禽	22	20	22	23	21	22



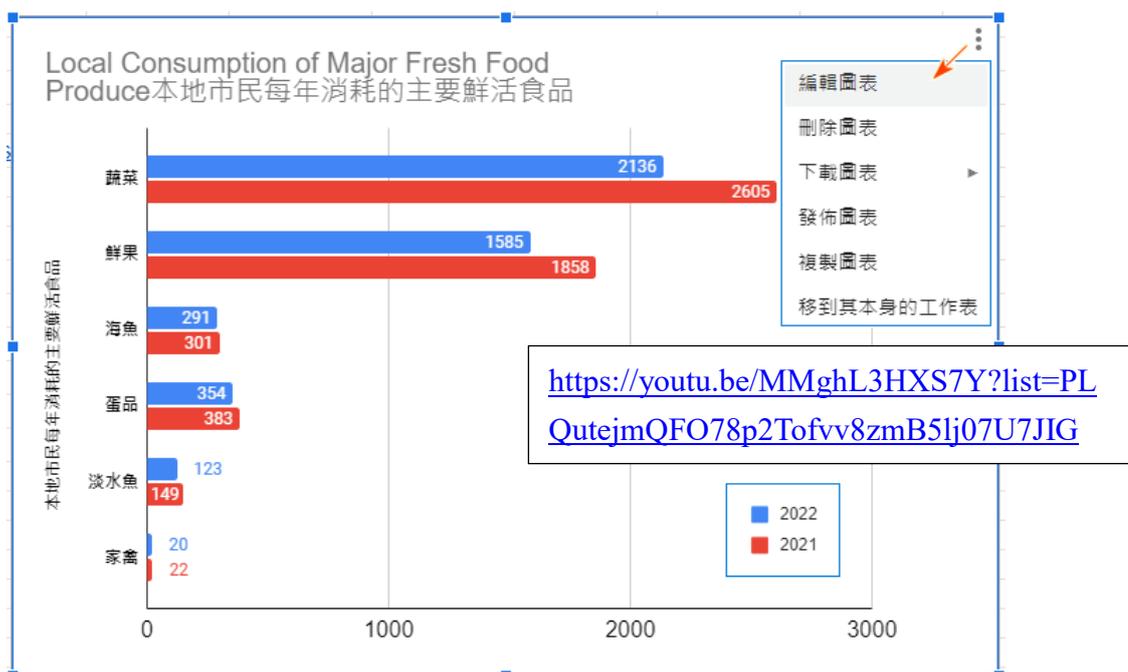
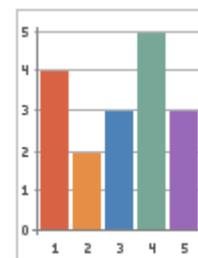
(1) 把【ex1.xlsx】複製到桌面，把工作表【Sheet1】改為【Food】
Copy 【ex1.xlsx】 to the Desktop

(2) 選取儲存格範圍 A3:B8，按『插入』，『橫條圖』

Select range A3:B8, insert barchart

加入標題(A1:Local consumption ...)、圖例、資料標籤

Add Title (A1:Local consumption ...), Legend, Data Label



<https://youtu.be/MMghL3HXS7Y?list=PLQutejmQFO78p2Tofvv8zmB5lj07U7JIG>

MS Excel (2)

SUM, AVERAGE, MIN, MAX



把【ex2.xlsx】複製到桌面 Copy【ex2.xlsx】to the Desktop

	A	B	C	D	E	F	G	H	I	J
1	1	2	2	1	2	3	1	2		
2	2	1	3	1	1	3	1	2		
3	3	1	3	2	1	1	3	3		
4	3	3	2	3	2	2	2	2		
5	1	2	3	2	3	1	1	1		
6	3	3	2	3	2	2	2	2		
7	1	2	3	1	2	1	1	2		
8	1	2	3	2	1	2	1	1		
9	1	3	2	1	2	2	1	3		
10	3	3	2	3	3	2	2	3		

SUM(和)； AVERAGE(平均)； MIN(最小)； MAX(最大)。

https://youtu.be/JvKQPsku9sI?list=PLQutejmQFO79bNfuHGDI_4d-wZ2rr_h0

試寫出下列公式的結果 Write the output of the following formulas :

儲存格 cell	公式 formula	輸出結果 Output
I1	=A1+A2+A3	6
I2	=SUM(A1,A2,A3,A4)	
I3	=SUM(A1:A5)	
I4	=AVERAGE(A1:A5)	
I5	=SUM(A1:A5)+SUM(C1:C5)	
I6	=SUM(A1:A5,C1:C5)	23
I7	=SUM(A6:C10)	
I8	=SUM(A1:D10)	
I9	=SUM(E1:H10)	
I10	=SUM(A1:H10)	
J1	=MIN(A1:H10)	1
J2	=MAX(A1:H10)	
J3	=MIN(AVERAGE(B2:C3),AVERAGE(D4:E5))	
J4	=MAX(MAX(F1:F10),AVERAGE(F1:F10))	
J5	=MIN(SUM(F:F),SUM(G:G))	
J6	=MAX(C4-D4,0)	
J7	=MIN(SUM(D7:F10),12)	
J8	=A1*A2*A3*A4	
J9	=SUM(E6:E10)/4	
J10	=SUM(F6:H7)^2	

小測 Quiz : =MIN(SUM(____),SUM(____)),
 =SUM(MIN(____),MAX(____))

<https://mrszeto.net/quiz/02-excel-min-max.swf>

MS Excel (3) (運算子 Operator、函數 Function)

運算子 Operator	用途 Purpose	例子 Example
+	加 Add	= A1+A2
-	減 Minus	= A1-A2
*	乘 Multiply	= A1*A2
/	除 Divide	= A1/A2
%	百分率 Percentage	= A1*20%
^	次方 Index	= A1^2



把【ex-3.xlsx】複製到桌面 Copy【ex3.xlsx】to the Desktop

並在 D2, D4-D10 寫入適當公式。 Fill in cells D2, D4-D10 with suitable formulas.

	A	B	C	D	
1	旅行 Picnic	全班人數 Total no.of students	每人付款 Pay per person	總數 Total	公式 Formula
2		40	\$50	\$2,000	
3	食物 Food	數量 Quantity	單價 Unit Cost	金額 Cost	
4	雞翼 A	2	\$2	\$4	
5	雞脾 B	1	\$5	\$5	
6	牛丸 C	5	\$0.2	\$1	
7	燒叉 D	1	\$2	\$2	
8	飲品 E	2	\$4	\$8	
9			總數 Total	\$800	
10			尚餘 Balance	\$1,200	

公式 Formulas

https://youtu.be/5jAcKkfZhQI?list=PLQutejmQFO79b_NfuHGDI_4d-wZ2rr_h0&t=34

MS Excel (4) (測考成績 Test Result)

1. 把【ex-4.xlsx】複製到桌面 Copy【ex4.xlsx】to the Desktop

	A	B	C	D	E	F	G	H	I
1	班別 Class	班號 Number	性別 Gender	中文 Chi	英文 Eng	數學 Math	總分 Total	平均分 Average	名次 Rank
2	1A	1	M	48	61	49			
3	1A	2	M	47	71	68			
4	1A	3	M	30	31	51			
5	1A	4	M	21	39	43			
6	1A	5	M	43	31	65			
:									
:									
161	1D	40	F	72	69	67			

162		平均	Avg						
163		最低	Min						
164		最高	Max						

2. 在 G2 (總分), H2 (平均分) 寫入適當公式。

Fill in cells G2 (Total), H2 (Average)
with suitable formulas.

3. 在 D162-D164 寫入適當公式。

Fill in cells D162-D164 with suitable formulas.

4. 為範圍 D2:F161 設定自動格式化條件：

若分數 < 50, 轉為紅色。

Set "Conditional formatting" criteria for D2:F161:
change to red, if < 50.

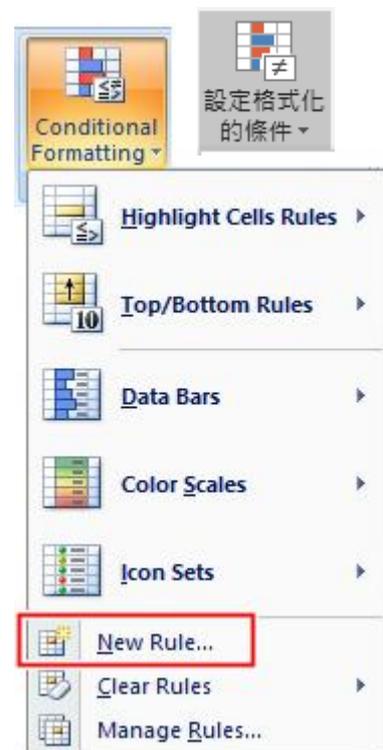
編輯規則說明(E):

只格式化下列的儲存格(O):

儲存格值 小於 50

format

預覽: AaBbCcYyZz



https://youtu.be/RX4FB3ZeRHY?list=PLQutejmQFO79b_NfuHGDI_4d-wZ2rr_h0

MS Excel (5) (水費單 Water Bill)

<https://mrszeto.net/home/javascript/water-bill.htm>

	A	B	C	D	E	F	G
1	耗水量 consumption	(m ³)	收費 cost (\$/m ³)		用水量 consumption	65	應付 Pay
2	首 First	10	\$0		10		
3	其次 Next	30	\$3		30		
4	其次 Next	20	\$6		20		
5	其餘 Rest		\$9		5		
6						Total	

= min(10,65)

= 65 - 10
= 55

= \$0 * 10

1. 把【ex-5.xlsx】複製到桌面 Copy【ex5.xlsx】 to the Desktop

	9 m ³	35 m ³	45 m ³	65 m ³
\$0				10
\$3				30
\$6				20
\$9				5
應付 Pay				0+90+120+45

2. 計算應付金額 Pay : $G2 = C2 * E2$
並複製儲存格 Copy to cells : G2→G3→G4→G5

3. 計算共付金額 Total : $G6 = G2+G3+G4+G5$

4. 輸入公式 Formula :

$$E2 = F1 \text{ 或 } B2 \text{ (兩者選其中最小的一個) minimum value (F1 or B2)}$$

$$F2 = F1 - E2$$

5. 複製儲存格 Copy to cells : E2→E3→E4→E5 , F2→F3→F4 , G2→G3→G4→G5

6. 更改 F1 的值 (用水量) Alter the value of F1 (water consumption)

https://youtu.be/Dd8Miqev2c0?list=PLQutejmQFO79bNfuHGDI4d-wZ2rr_h0

MS Excel (6) (時間表 Timetable)

我的上課時間表 (加框線) my timetable (with borders)

	A	B	C	D	E	F	G
1	上課時間表						
2							
3	1	8:10	國語	社會	數學	數學	數學
4		9:00					
5	2	9:10	國語	數學	英文	社會	電腦
6		10:00					
7	3	10:10	數學	數學	國語	美勞	自然
8		11:00					
9	4	11:10	社會	音樂	國語	美勞	自然
10		12:00					
11	午 餐 與 午 休						
12	5	13:10	自然	英文		體育	生活倫理
13		13:50					
14	6	14:00	自然	國語		健康	音樂
15		14:40					
16	7	14:50	鄉土	體育		道德	團體活動
17		15:30					

Borders

Grid icons for different border styles.

Draw Borders

- Draw Border
- Draw Border Grid
- Erase Border
- Line Color >
- Line Style >
- More Borders...

		Mon	Tue	Wed	Thu	Fri
	08:10-08:20	課前集會				
1	08:20-08:50	3B 資訊 STEM Lab		1A	S.5 資通 STEM Lab	1B 週會
2	08:50-09:25	3B 資訊 STEM Lab		1A	S.5 資通 STEM Lab	1B
	09:25-09:40	9:25-9:40 Recess				
3	09:40-10:15		S.5 資通 STEM Lab	S.5 資通 STEM Lab	3A IT STEM Lab	
4	10:15-10:50		S.5 資通 STEM Lab		3A IT STEM Lab	
	10:50-11:05	10:50-11:05 Recess				
5	11:05-11:40		1C 資訊 STEM Lab	1C 資訊 STEM Lab		
6	11:40-12:15		1B	1C 資訊 STEM Lab		
	12:15-13:20	1:00-1:20 Lunch				
7	13:20-14:00	S.5 資通 STEM Lab			3C 資訊 STEM Lab	1A
8	14:00-14:35	S.5 資通 STEM Lab			3C 資訊 STEM Lab	13:50-14:00
	14:35-14:45	2:35-2:45 Recess				
9	14:45-15:20					14:00-15:20 多元活動堂
	15:20-15:30					

Extra: 當更表 Roster (see p.1)

MS Excel (7) (儲存格格式 Cell Format)

1. 通用格式 General format (Ctrl-shift-~)

2. 複製儲存格 B1:B7 內容至 C1:C7。點選 C2，然後按 Ctrl-Shift-1，寫出儲存格的格式改變。
 Copy cells B1:B7 to C1:C7. Click on cell C2 and press Ctrl-Shift-1. Write down the format change.

	A	B	C	D
1	Ctrl-Shift-~	1234.567	1234.567	一般 General
2	Ctrl-Shift-1	1234.567		
3	Ctrl-Shift-2	1234.567		
4	Ctrl-Shift-3	1234.567		
5	Ctrl-Shift-4	1234.567		
6	Ctrl-Shift-5	1234.567		
7	Ctrl-Shift-6	1234.567		

3. 日期(自訂格式) Date (Custom)

	A	B	C	D
1	Date - Ctrl-; →	28/2/2025	轉格式 format	預期 Expected
2		=B1+1		2025 年 2 月 28 日
3		=B2+1		2025-02-28
4		=B3+1		28-Feb-24
5		=B4+1		28-February 2025
6		=B5+1		Mon 週一
7		=B6+1		Tuesday 星期二
8	Time - Ctrl: :	=B7+1		05.03.2025 Mon

MS Excel (8) (支出記錄 Expense Records)

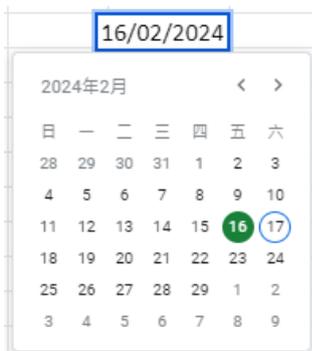
1. 日常支出記錄 Daily Expense Records

日期 date	項目 item	摘要 details	支出 expense	收入 income	結餘 balance
2024-11-10 Sun	結餘 Balance	上週結餘			680
2024-11-10 Sun	收入 Income	本週零用錢		1,200	
2024-11-10 Sun	交通 transport	火車票	135		
2024-11-10 Sun	娛樂 entertainment	門票	600		
2024-11-10 Sun	飲食 food	午餐	45		
2024-11-11 Mon	收入 Income			500	
2024-11-11 Mon	文具 stationery	原子筆	80		
2024-11-11 Mon	其他 others	Hello Kitty 玩具	300		
2024-11-12 Tue	交通 transport	八達通增值	500		
2024-11-13 Wed	飲食 food	晚餐	100		
2024-11-13 Wed	收入 Income			800	
2024-11-14 Thu	飲食 food	點心	40		
2024-11-14 Thu	飲食 food	晚餐	120		
2024-11-14 Thu	娛樂 entertainment	演唱會門票	800		
2024-11-14 Thu	飲食 food	午餐	80		
2024-11-15 Fri	收入 Income			1,500	
2024-11-15 Fri	文具 stationery	圖書	1,200		
2024-11-16 Sat	衣物 clothing	襪子	200		

Ctrl-D (copy & paste), **Alt-↓** (下拉清單 drop-down list)

2. 格式化為表格 Format as table

日期格式 Date format : yyyy-mm-dd ddd



Google sheet (date)



3. 下拉選單 Drop down list (B3:B100) : 資料、驗證、清單 Data → Data Validation → List

The screenshot shows the Excel ribbon with the 'Data' tab selected. The 'Data Validation' button is highlighted with a red box. A tooltip for 'Data Validation' is visible, stating: 'Pick from a list of rules to limit the type of data that can be entered in a cell.' Below the ribbon, the 'Data Validation' dialog box is open, with the 'Settings' tab selected. The 'Allow:' dropdown is set to 'List' (highlighted with a red box), and the 'Data:' dropdown is set to 'between'. The 'Source:' field contains '= \$H\$11:\$H\$14' (also highlighted with a red box). To the left of the dialog, two dropdown menus are shown: one with Chinese characters (收入, 衣物, 飲食, 租金, 交通, 娛樂, 文具, 其他, 收入) and one with English words (income, clothing, food, rent, transport, entertainment, stationery, others, income). A red arrow points from the 'List' dropdown in the dialog to the English dropdown menu.

清單(來源)	List (source)
支出分類	Category
衣物	clothing
飲食	food
租金	rent
交通	transport
娛樂	entertainment
文具	stationery
其他	others
收入	income

MS Excel (9a) (解難 Problem Solving)

範例 Example

一個測驗分為甲、乙兩部，各有 10 題。
 甲部：答對 1 題得 7 分，每題需時 6 分鐘；
 乙部：答對 1 題得 8 分，每題需時 7 分鐘；

考生在甲乙兩部，必須各答 4 題或以上，
 測驗時限為 90 分鐘。求最高分數多少？

You are about to take a test which contains two sections, A and B. There are 10 questions in each section.

The marks and time required for each question in the two sections are given in the following table:

You must attempt at least 4 questions from each section and the maximum time available for the test is 90 minutes.

In order to maximize your score, how many questions in each section should you do? What is the maximum score?

	答題數目 no.of Qn attempted	每題分數 Marks/Qn	每題需時 Time/Qn	min	max
甲部 section A	10				
乙部 section B	10				
Total		150 points	130 min		
max					

SUMPRODUCT

	A	B	C	
1	5	3	15	← =A1*B1
2	3	6	18	← =A2*B2
3	2	5	10	← =A3*B3
			43	← =SUM(C1:C3)

=SUMPRODUCT(A1:A3,B1:B3)

答案 Answers : A = ____, B = ____, 最高分數 maximum score = ____

Conditional formatting: if time > 90 then turn to red

設定自動格式化條件：若需時 >90，轉為紅色。

MS Excel (9b) (解難 Problem Solving)

1. 某團體利用飛機把衣服、藥物送到地震災區。

- (1) 衣服放箱、藥物放盒
- (2) 每個箱和盒皆佔 0.9 立方米
- (3) 一箱衣服重 27kg、一盒藥物重 54kg

飛機可載重 21,600 kg，容量 540 立方米。

一箱衣服可幫助 12 家庭、一盒藥物可幫助 18 家庭。

求最多可幫助多少個家庭

Clothes and medicines are to be sent to victims of an earthquake in a certain country.

- (1) The clothes are put in boxes whereas the medicines are stored in containers.
- (2) Each box and each container occupy the same space of 0.9 cubic meters.
- (3) Each box of clothes weighs 27 kg whereas each container of medicines weighs 54 kg.

An aeroplane is going to take these supplies to the country. The aeroplane can carry at most 21,600 kg of the supplies and has a storage space of 540 cubic meters. It is supposed that x boxes of clothes and y containers of medicines are taken.

A box of clothes can help 12 families while a container of medicines can help 18 families. Assuming that each family can get either clothes or medicine, find the number of boxes of clothes and the number of containers of medicines that should be sent in order to maximize the number of families that can be helped.

	數量 quantity	容量 volume	重量 weight (kg)	可幫助家庭 number of families helped
衣服(箱) Clothes	A=			
藥物(盒) medicines	B=			
總數 total				
最多 max				

答案 Answers : A = _____, B = _____

MS Excel (9c) (解難 Problem Solving)

2. 售價：單層巴士\$20; 雙層巴士\$45
 用最多\$400 買不多於 10 輛巴士
 求各買巴士多少? 最多支出多少?

In a toy shop, there are 2 types of toy buses: 'single-deck' and 'double-deck'. The selling prices for the two types of buses are \$20 each and \$45 each respectively. A boy wants to buy x 'single-deck' and y 'double-deck' toy buses.

If the total number of toy buses bought should not be greater than 10 and the boy has \$400 to spend, how much money he will spend at most?

	售價 Unit Price	數量 quantity
單層巴士 single-deck		A=
雙層巴士 double-deck		B=
總金額 Total (\$)		
最多 max (\$)		

3. 游泳池可容納最多 250 成人及 250 小童，且不可多於 450 人。
 入場費：成人\$20、小童\$15。每兩個小童必須有一個成人陪同。求入場費的最大值。

A swimming pool in a certain estate can accommodate at most 250 adults and 250 children. There should be no more than 450 people in the pool. The admission fee is \$20 for each adult and \$15 for each child. It is required that for every two children admitted there is at least one adult. It is supposed that x adults and y children are admitted to the swimming pool. Find the total amount of admission fee.

	人數 frequency	max	入場費 admission fee	成人 Adults × 2
成人 Adult	A=			
小童 Child	B=			
總數 Total				

MS Excel (9d) (解難 Problem Solving)

4. 製餅師傅打算按以下條件，製造 x kg 蛋糕及 y kg 餅乾：

- (1) 造 1kg 蛋糕：成本\$60；造 1kg 餅乾：成本\$30。製餅師傅最多花\$1,200
 - (2) 製成的蛋糕、餅乾不可超過 30kg
 - (3) 利潤為：蛋糕\$15/kg、餅乾\$7/kg
 - (4) 最少要造 5kg 蛋糕及 5kg 餅乾
- 求最大利潤。

A baker wants to bake x kg of cakes and y kg of biscuits subject to the following conditions:

- (1) The cost of baking 1 kg of cakes is \$60 and the cost of baking 1 kg of biscuits is \$30. The baker decides to spend at most \$1,200.
- (2) The total weight of cakes and biscuits made should not exceed 30 kg.
- (3) The profits of selling cakes and biscuits are \$15/kg and \$7/kg respectively.
- (4) At least 5 kg of cakes and 5 kg or biscuits should be made.

Find the maximum profit.

10. 超市售賣橙汁及蘋果汁。超級市場經理訂了橙汁的數量，至少是蘋果汁數量的兩倍。超級市場只可容納 450 瓶果汁。利潤：橙汁\$2.5；蘋果汁\$3.0。求最大利潤。

A supermarket sells two kinds of juice: orange juice and apple juice. To meet the taste of the customers, the manager orders a number of bottles of orange juice which is at least twice the number of bottles of apple juice. The storage space available can keep at most 450 bottles of juice. The profits on selling a bottle of orange juice and on selling a bottle of apple juice are \$2.5 and \$3 respectively.

How many bottles of orange juice and how many bottles of apple juice should be sold daily when the profit attains a maximum? What is the maximum daily profit on selling the juice?

MS Excel (10) (複製公式 Copy formulas)

相對位址 relative address (A1)及絕對位址 absolute address (\$A\$1) [03-excel-copy-demo.swf](#)

	A	B	C	D	E	F	G
1	1	4	7	8	3	9	=MAX(A1:F1)
2	2	5	8	1	5	4	
3	3	6	9	6	7	12	(g)
4	=SUM(A1:A3)	(b)	(c)				
5	(a)						
6	=SUM(A\$1:A\$3)	(e)	(f)				
7	(d)						

按 press F4

(a) 複製公式 Copy formulas (由 from ___ → 至 to ___)

	cell	公式 formula	至 to	新公式 new formula	數值 value
(a)	A4	=SUM(A1:A3) 6	A4→A5		
(b)			A4→B4		
(c)			A4→C4		
(d)	A6	=SUM(A\$1:A\$3) 6	A6→A7		
(e)			A6→B6		
(f)			A6→C6		
(g)	G1	=MAX(A1:F1)	G1→G3		

(b) 測試題 Quiz : 複製公式 Copy formulas (由 from ___ → 至 to ___)

	A51 公式 formula	A51→E51 : 新公式 new formula	A51↓A61 : 新公式 new formula
(h)	=C3+D4		
(i)	=C\$3+D\$4		
(j)	=\$C3+\$D4		
(k)	=\$C\$3+\$D\$4		

(c) 應用 Application :

	A	B	C	D	E	F
1						
2		(1)			(2)	
3	10	公式 formula	數值 value		公式 formula	數值 value
4	1	=A3+A4	11		=A\$3+A4	11
5	2					
6	3					
7	4					
8	5					

小測 Quiz : <https://mrszeto.net/quiz/03-excel-copy.swf>

<https://mrszeto.net/s2/F2Excel2009.htm>

(d) 複製公式 Copy Formulas

	A	B	C	D	E	F	G
1	water	(m ³)	收費 cost (\$/m ³)		consumption	65	應付 pay
2	首 First	10	\$0		=MIN(B2,F1)	=F1-E2	=C2*E2
3	其次 Next	30	\$3				
4	其次 Next	20	\$6				
5	其餘 Rest		\$9				
6						Total	

(e)

	A	B	C	D
1	旅行 Picnic	全班人數 no.of students	每人付款 pay	總數 Total
2		40	\$50	=B2*C2
3	食物 Food	數量 Quantity	單價 Unit Cost	金額 amount
4	雞翼 A	2	\$2	
5	雞脾 B	1	\$5	
6	牛丸 C	5	\$0.2	
7	燒叉 D	1	\$2	
8	飲品 E	2	\$4	
9			總數 Total	=SUM(D4:D8)
10			尚餘 Balance	=D2-D9

(f) 挑戰題 Challenge : 乘數表 multiplication table

	A	B	C	D	E	F	G	H	I
1	m×n	1	2	3	4	5	6	7	8
2	1	=A2*B1							
3	2								
4	3								
5	4								
6	5								
7	6								
8	7								
9	8								

↓ : +數字 123

→ : +字母 ABC

小測 Quiz: =SUM(\$A2:B\$4)

由 from C10 複製至 copy to D15

新公式 new formula: =SUM(_____:_____)

<https://mrszeto.net/quiz/03-excel-copy.swf>