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Addressing Cells

ELEC1006: ENGINEERING COMPUTING

Relative & Absolute Cell Addressing

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- Relative cell addressing:

  Automatic incrementing of cell addresses during the copy process, for example: B5.

- Absolute cell addressing:

  Unchanged during the copy process, for example: B5

Relative Cell Address (Row)

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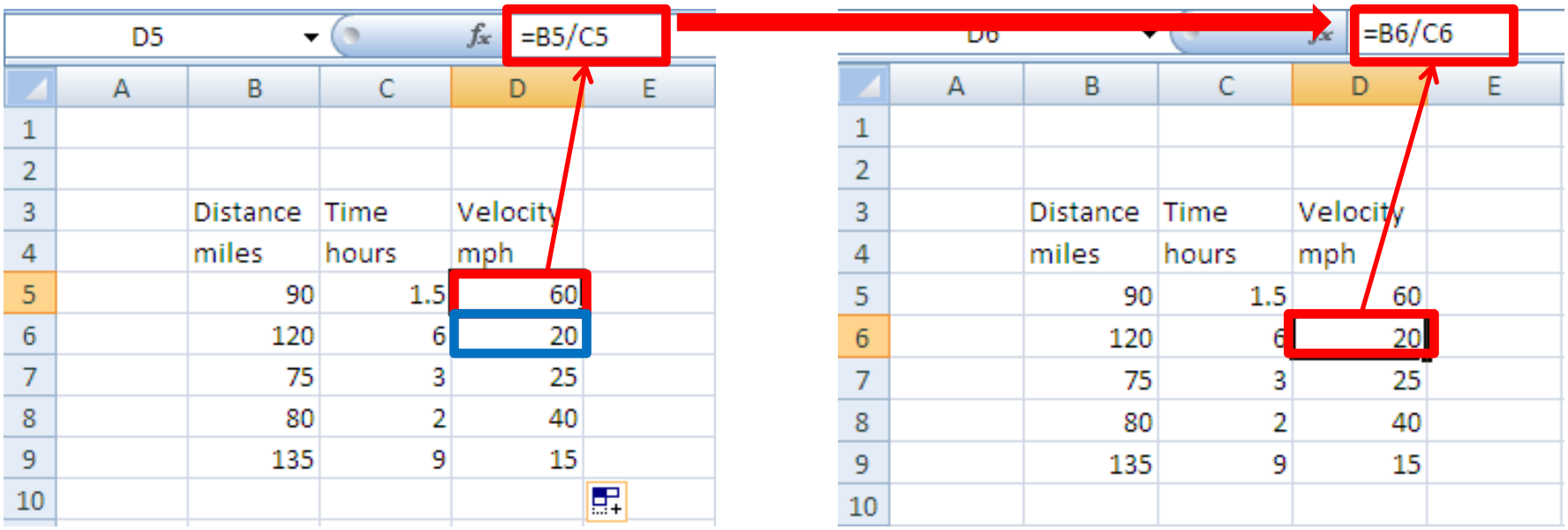

	A	B	C	D	E
1					
2					
3		Distance	Time	Velocity	
4		miles	hours	mph	
5		90	1.5	60	
6		120	6	20	
7		75	3	25	
8		80	2	40	
9		135	9	15	
10					

	A	B	C	D	E
1					
2					
3		Distance	Time	Velocity	
4		miles	hours	mph	
5		90	1.5	60	
6		120	6	20	
7		75	3	25	
8		80	2	40	
9		135	9	15	
10					

Copying down increments row numbers

Relative Cell Address (Column)

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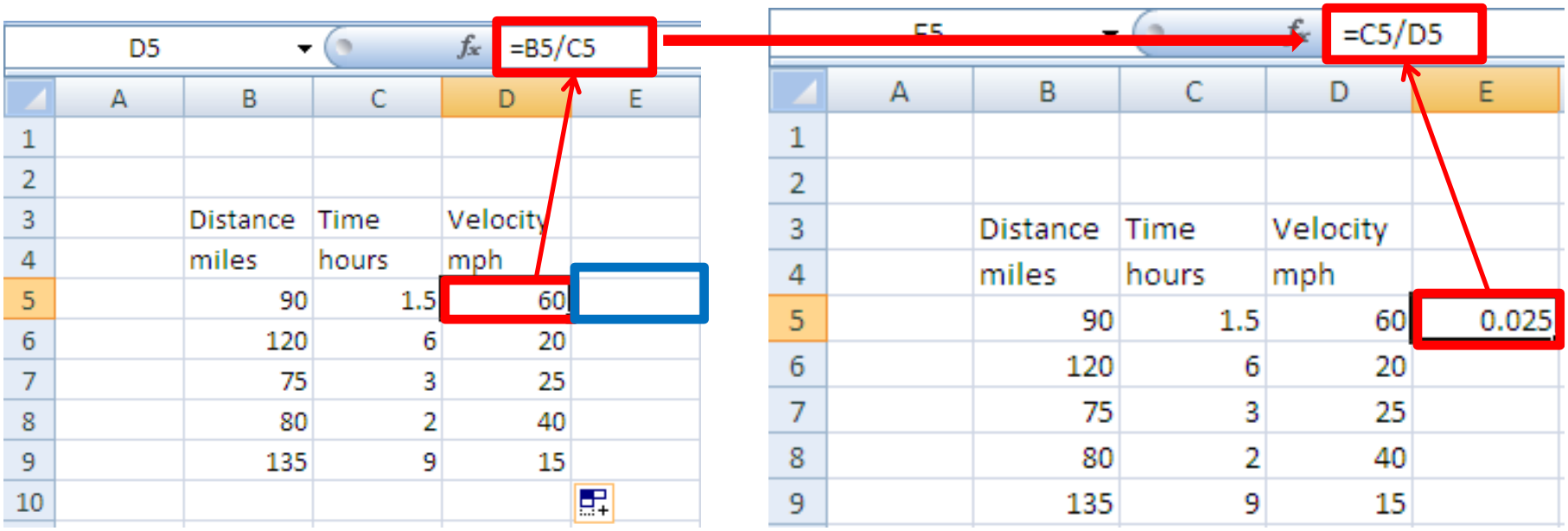

Copying across increments column letters

Relative Cell Address (Row & Column)

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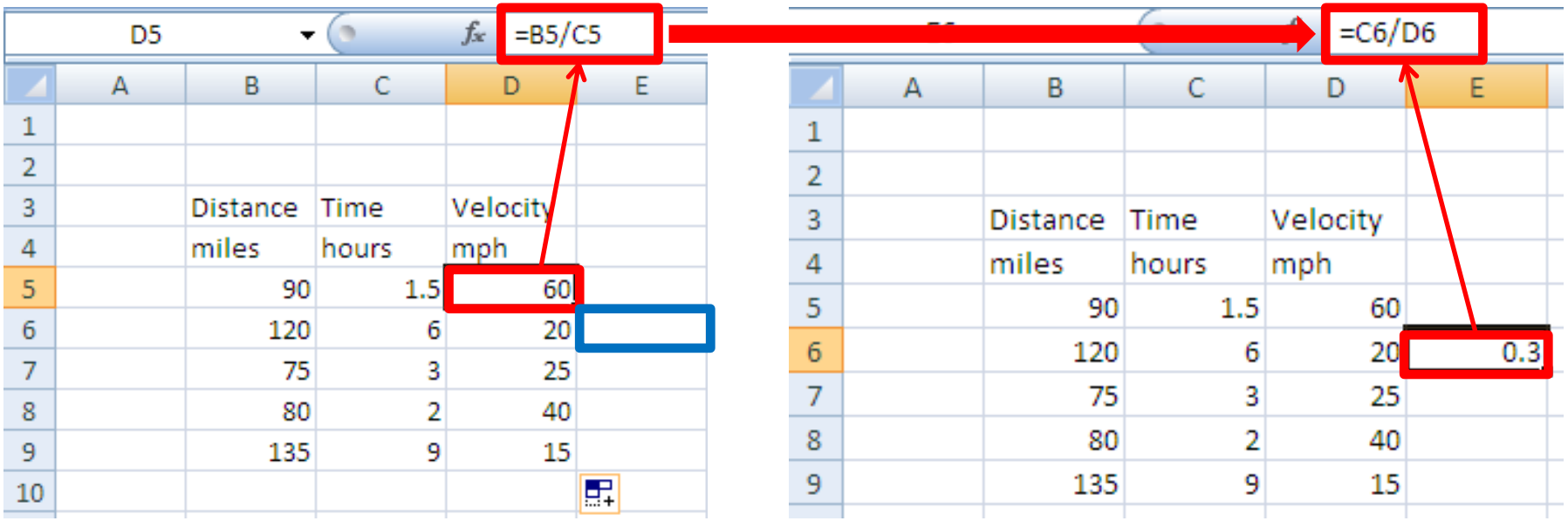

Copying diagonally increments both row numbers and column letters

Absolute Cell Address

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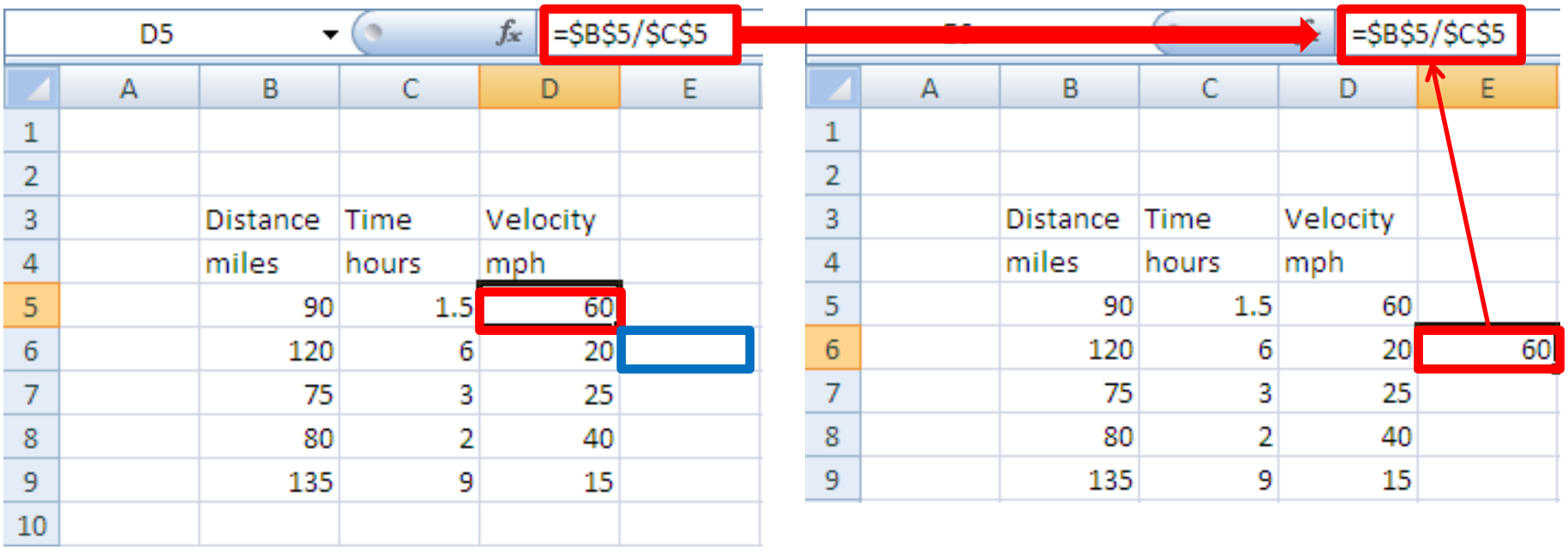

	A	B	C	D	E
1					
2					
3		Distance	Time	Velocity	
4		miles	hours	mph	
5		90	1.5	60	
6		120	6	20	
7		75	3	25	
8		80	2	40	
9		135	9	15	
10					

	A	B	C	D	E
1					
2					
3		Distance	Time	Velocity	
4		miles	hours	mph	
5		90	1.5	60	
6		120	6	20	60
7		75	3	25	
8		80	2	40	
9		135	9	15	

Unchanged row number & column alphabet.

Relative-Absolute Cell Address

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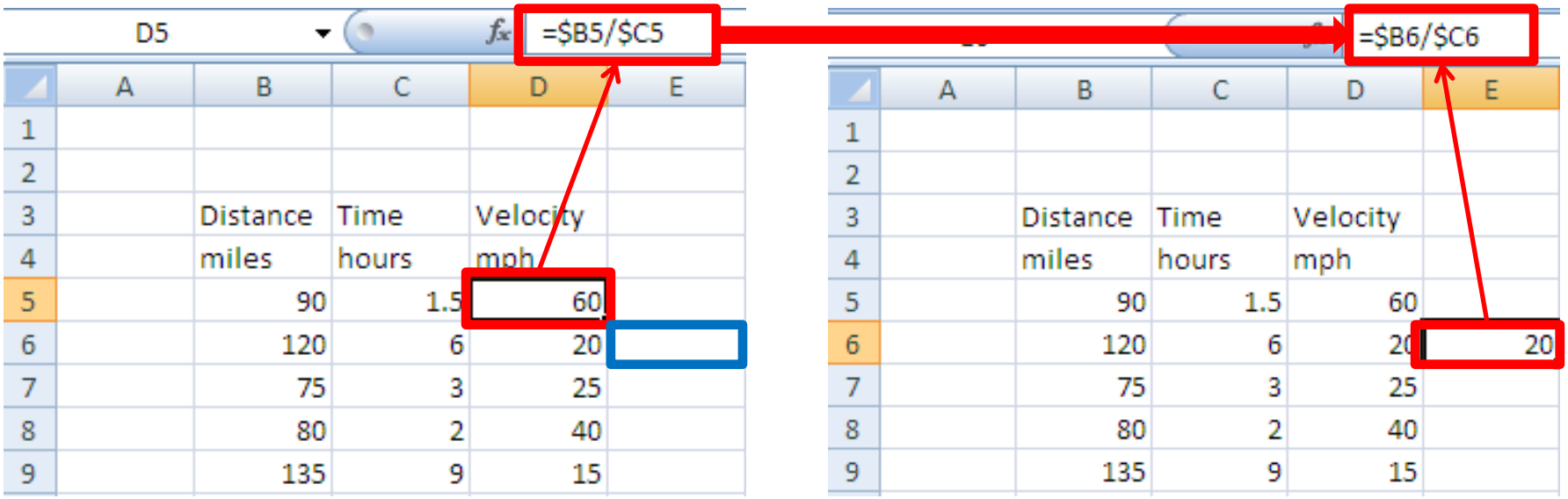

Increments row numbers but column letters unchanged.

Multiplication Table Example

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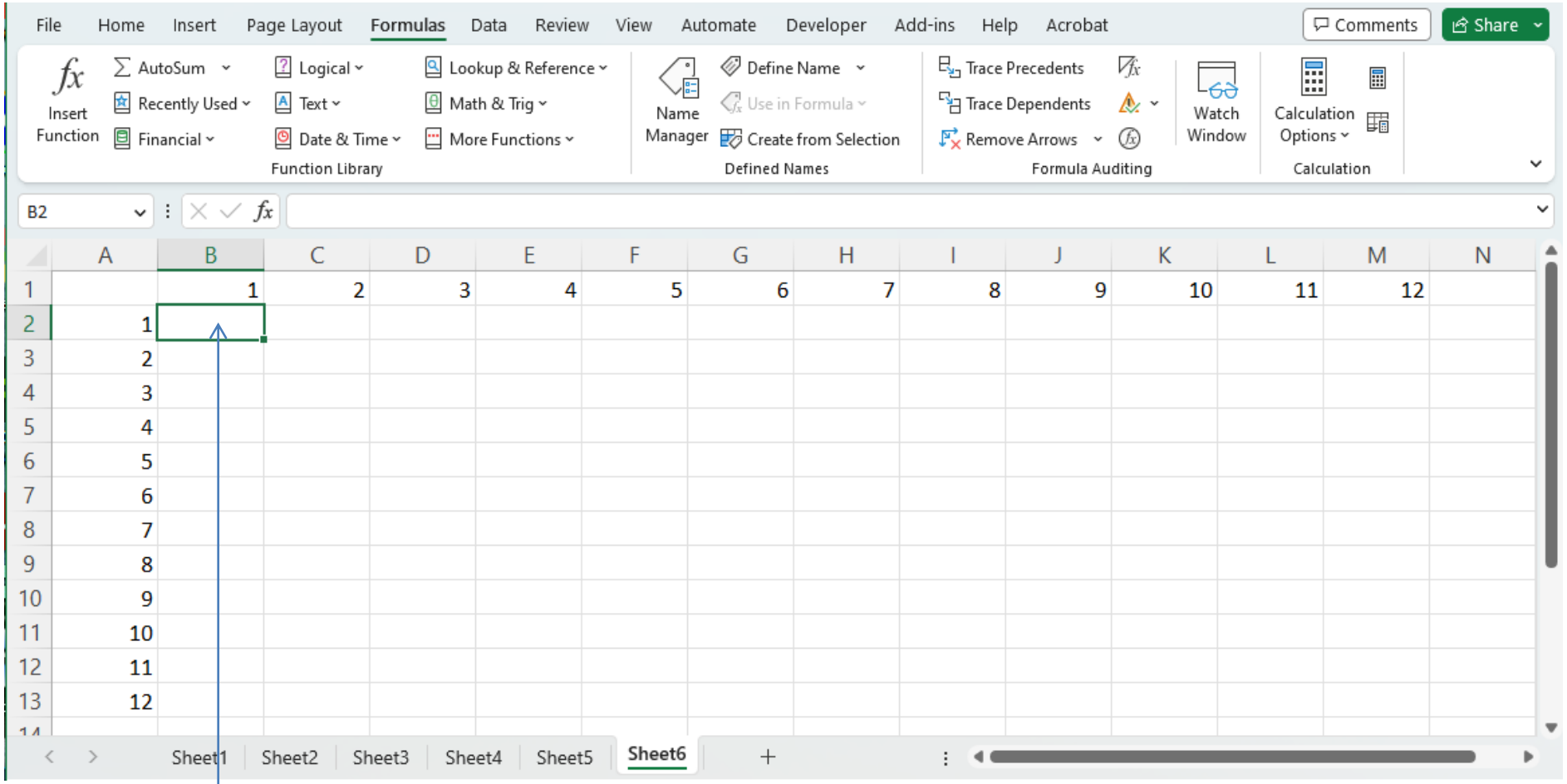

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1		1	2	3	4	5	6	7	8	9	10	11	12	
2	1													
3	2													
4	3													
5	4													
6	5													
7	6													
8	7													
9	8													
10	9													
11	10													
12	11													
13	12													

What is the formula to enter in B2 and drag across, down and diagonally to create the times table?

Incorrect Multiplication Table Implementation: A2*B1

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	A	B	C	D	E	F	G	H	I	J	K	L	M
1		1	2	3	4	5	6	7	8	9	10	11	12
2	1	1	2	6	24	120	720	5040	40320	362880	3628800	39916800	4.79E+08
3	2	2	4	24	576	69120	49766400	2.51E+11	1.01E+16	3.67E+21	1.33E+28	5.32E+35	2.55E+44
4	3	6	24	576	331776	2.29E+10	1.14E+18	2.86E+29	2.89E+45	1.06E+67	1.41E+95	7.5E+130	1.9E+175
5	4	24	576	331776	1.1E+11	2.52E+21	2.88E+39	8.25E+68	2.4E+114	2.5E+181	3.6E+276	#NUM!	#NUM!
6	5	120	69120	2.29E+10	2.52E+21	6.37E+42	1.84E+82	1.5E+151	3.6E+265	#NUM!	#NUM!	#NUM!	#NUM!
7	6	720	49766400	1.14E+18	2.88E+39	1.84E+82	3.4E+164	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
8	7	5040	2.51E+11	2.86E+29	8.25E+68	1.5E+151	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
9	8	40320	1.01E+16	2.89E+45	2.4E+114	3.6E+265	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
10	9	362880	3.67E+21	1.06E+67	2.5E+181	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
11	10	3628800	1.33E+28	1.41E+95	3.6E+276	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
12	11	39916800	5.32E+35	7.5E+130	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
13	12	4.79E+08	2.55E+44	1.9E+175	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!

Correct Multiplication Table Implementation: $A2*B$1

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	A	B	C	D	E	F	G	H	I	J	K	L	M
1		1	2	3	4	5	6	7	8	9	10	11	12
2	1	1	2	3	4	5	6	7	8	9	10	11	12
3	2	2	4	6	8	10	12	14	16	18	20	22	24
4	3	3	6	9	12	15	18	21	24	27	30	33	36
5	4	4	8	12	16	20	24	28	32	36	40	44	48
6	5	5	10	15	20	25	30	35	40	45	50	55	60
7	6	6	12	18	24	30	36	42	48	54	60	66	72
8	7	7	14	21	28	35	42	49	56	63	70	77	84
9	8	8	16	24	32	40	48	56	64	72	80	88	96
10	9	9	18	27	36	45	54	63	72	81	90	99	108
11	10	10	20	30	40	50	60	70	80	90	100	110	120
12	11	11	22	33	44	55	66	77	88	99	110	121	132
13	12	12	24	36	48	60	72	84	96	108	120	132	144

More info

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- References
  - Excel online help
  - Number of good books on Excel: e.g. Larsen, R. W. (2013). *Engineering with Excel* (4th ed.). Boston: Pearson.
  - Numerous online resources
- Widely available, learn by using