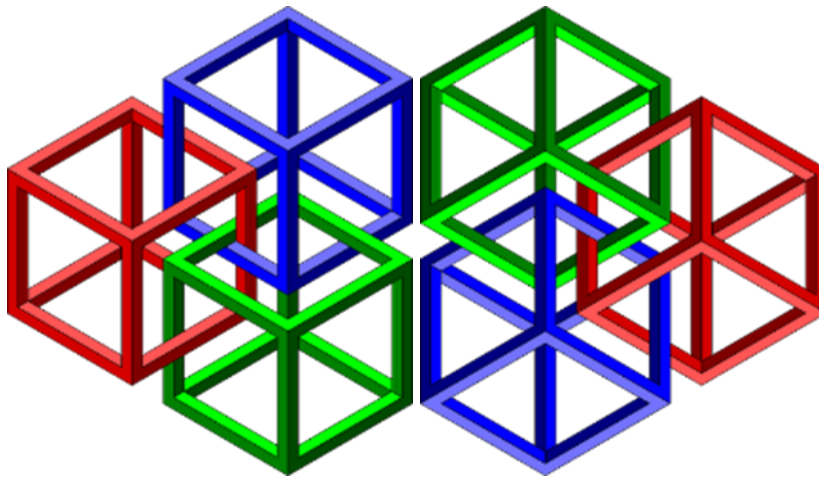




MATHS PUZZLE BOOK VOLUME FOUR

= for keen puzzlers aged 11 to 105! =



- ◇ The reason for producing this Puzzle Book is because I am aware that in this era of the “virus”, periods of boredom will creep in and the puzzles can be done as light relief.
- ◇ This document is not connected to any organisation and there are no financial implications involved. This is me giving back to Society which has treated me well.
- ◇ This booklet can be printed in black and white or colour and it can be printed page by page if you do not want to print the whole document.
- ◇ I have a great deal more material to consider for further publications. Do let me know which are your favourite puzzles and I will include more in the next edition.

Puzzles created or adapted by Douglas Buchanan





DITLOIDS

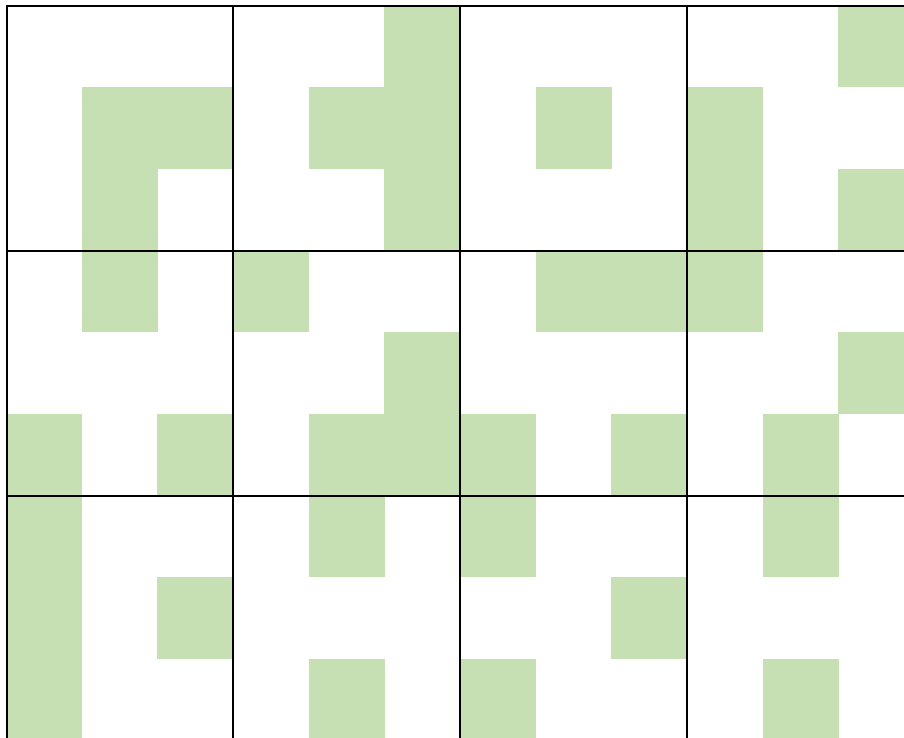
With the information given work out the expressions.

5 F on your H = 5 **fingers** on your **hand**

- A. 26 L- of the A-
- B. 7 W- of the W-
- C. 16 O- in the P-
- D. 12 S- of the Z-
- E. 9 P- in the S- S-
- F. 88 P- K-
- G. 13 S- on the A- F-
- H. 0 D- C- at which W- F-
- I. 18 H- on a G- C-
- J. 90 D- in a R- A-

CROSSWORD JIGSAW

A jigsaw has been cut into 3 by 3 squares and they have now been muddled. Rearrange the pieces to create the original crossword



E	A	F	R	O	U	A	M	A
R	A	M	I	T	A	P	B	I
Y	E	E	S	C	O	L	D	
O	R	Z	E	E	A	Z	E	
E	R	R	E	R	A	M	O	
V	F	R	Y	E	O	W		
L	E	O	N	A	O	A		
D	E	E	R	I	N	N	P	S
M	N	A	N	E	L			





SIX LETTER WORDS

Rearrange the two-letter pieces to make six sensible 6-letter words

ng	ox	ch
ks	ck	zi
ed	br	en
as	yg	ic
do	iz	ki
ze	pr	es

MAKE 24

Using ALL four numbers write a number sentence where the result is 24. You can only use the simple operations addition, multiplication, subtraction and division.

2	5	9	7	
7	9	13	5	
12	3	5	5	
3	15	7	19	
4	5	7	13	

THE HAPPY FARMERS RETURN

Four happy farmers have returned to have a coffee in a Milk Parlour and they were setting each other riddles. Try and work out how many animals, birds, fish or insects there were in each riddle

Farmer Tractor said: "On my farm I have hamsters and doves. I can see 16 heads and 50 legs. How many hamsters and doves do I have?"

Farmer Plough said: "I have rabbits and turkeys on my farm and I can see 11 heads and 36 legs. How many rabbits and turkeys do I have?"

Farmer Baler said: "In my barn I have normal chairs and three-legged stools. I can see 18 pieces of furniture and 60 legs. How many chairs and stools do I have?"

Farmer Harrow said: "In my hen house I saw my hens, of course, spiders and bees. I saw 18 heads and 104 legs. How many hens, spiders and bees did I see?"





LETTERED DICE

Each face on the 4 dice has a different letter on it. By rearranging them you can make the following words. Work out which letter belongs to which dice

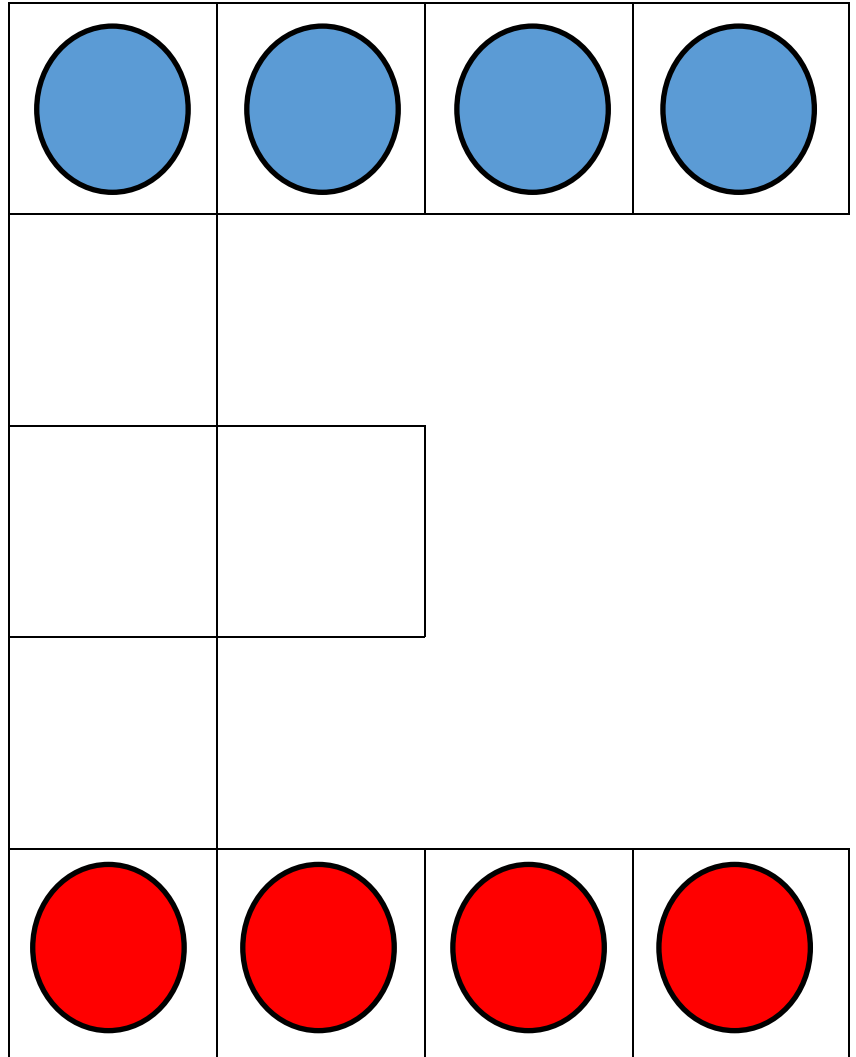
WHIT	TAXI	FERN	SPEY
VOID	LIFE	ZONE	KNOW
CHAP	BUSH	GAMP	WIPE
GELD	BACK	SUET	No j or q

A	A	A	A
B	B	B	B
C	C	C	C
D	D	D	D
E	E	E	E
F	F	F	F
G	G	G	G
H	H	H	H
I	I	I	I
K	K	K	K
L	L	L	L
M	M	M	M
N	N	N	N
O	O	O	O
P	P	P	P
R	R	R	R
S	S	S	S
T	T	T	T
U	U	U	U
V	V	V	V
W	W	W	W
X	X	X	X
Y	Y	Y	Y
Z	Z	Z	Z

DICE 1	DICE 2	DICE 3	DICE 4

CHANGING PLACES

Move the counters so the red counters and the blue counters change places. You cannot jump over counters





FIND THE VALUES

Place the values in the correct boxes according to the information given

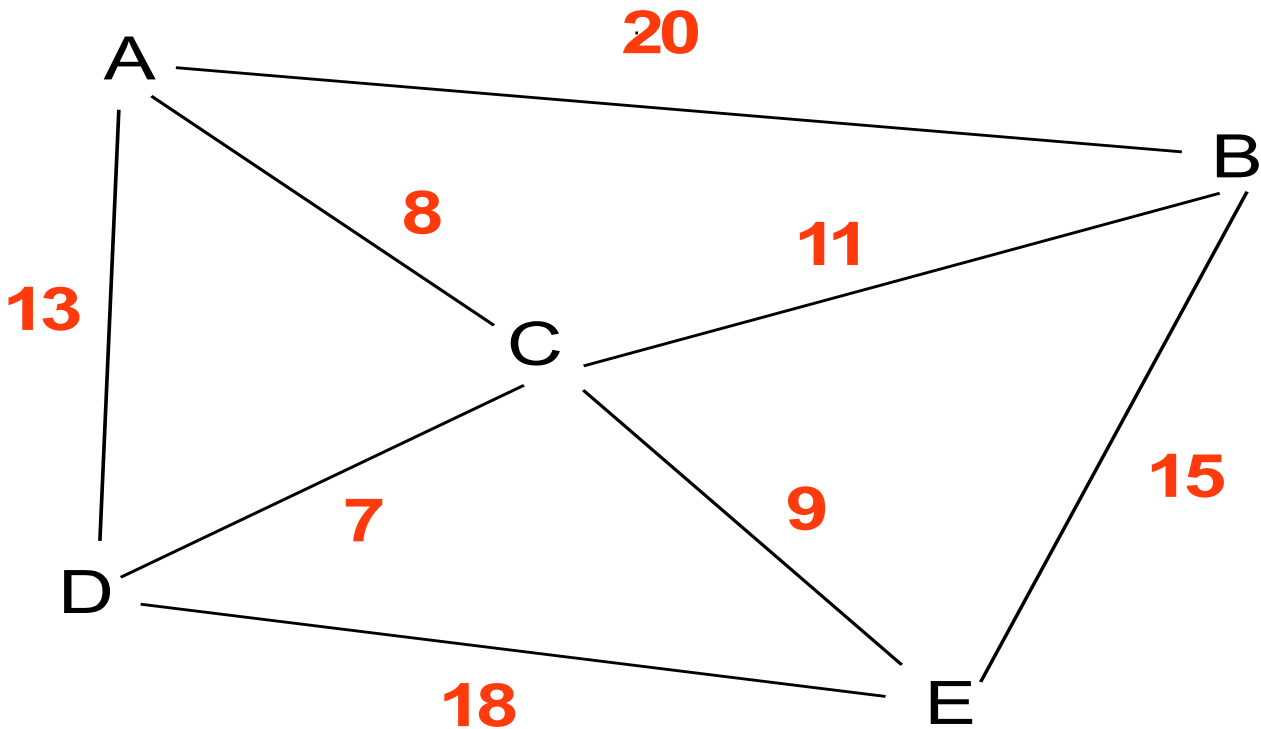
ONE	1 4 7 9 12				TWO	3 6 8 10 11			
A	B	C	D	E	A	B	C	D	E
$A + B + C = E$ D is 5 greater than A $D - B = 2$					$A - D = B$ $C \div D = E - B$				
THREE	2 5 13 14 15				FOUR	1 4 5 8 12			
A	B	C	D	E	A	B	C	D	E
A is a multiple of B D is a factor of E $E - B = C$					$A + D = C + E$ C is a factor of B $D > E$				
FIVE	2 7 9 10 11				SIX	3 6 13 14 15			
A	B	C	D	E	A	B	C	D	E
$B \times E = C + D$ $D - A = E$					E is a multiple of A $B - C = 8$ $D < B$				
SEVEN	1 3 6 8 13				EIGHT	3 5 6 10 15			
A	B	C	D	E	A	B	C	D	E
C is a multiple of D $(A + B) \div D = 7$ $A < (C + D)$					$B \div C = A$ B and D are multiples of C $D + C = B$				
NINE	4 5 7 12 15				TEN	1 3 7 10 14			
A	B	C	D	E	A	B	C	D	E
$D \div C = B \div E$ $D - A = E$ A and E are prime numbers					$A + C = B$ D is a multiple of C $D \div E = D$				





CYCLING CURLY

Curly created a cycling circuit for his friends and he told them how far to travel but not which check points to go through. Find each of his friends' routes.



	START / FINISH	DISTANCE	CHECK POINTS
Julie	A to D	38	Only visited once
Kyle	B to C	54	Only visited once
Lyn	C to C	65	Only visited once
Max	D to E	69	One visited twice
Nina	E to A	54	One visited twice

ANAGRAMS

These are traditional anagrams where you need to rearrange the letters to make a sensible word /s

- | | |
|---------------|----------------|
| 1. beetle car | 7. sumantion |
| 2. red canal | 8. Alan Roscoe |
| 3. disease | 9. chewits |
| 4. pipe panel | 10. true novel |
| 5. auctioned | 11. red anger |
| 6. pet shop | 12. moonside |

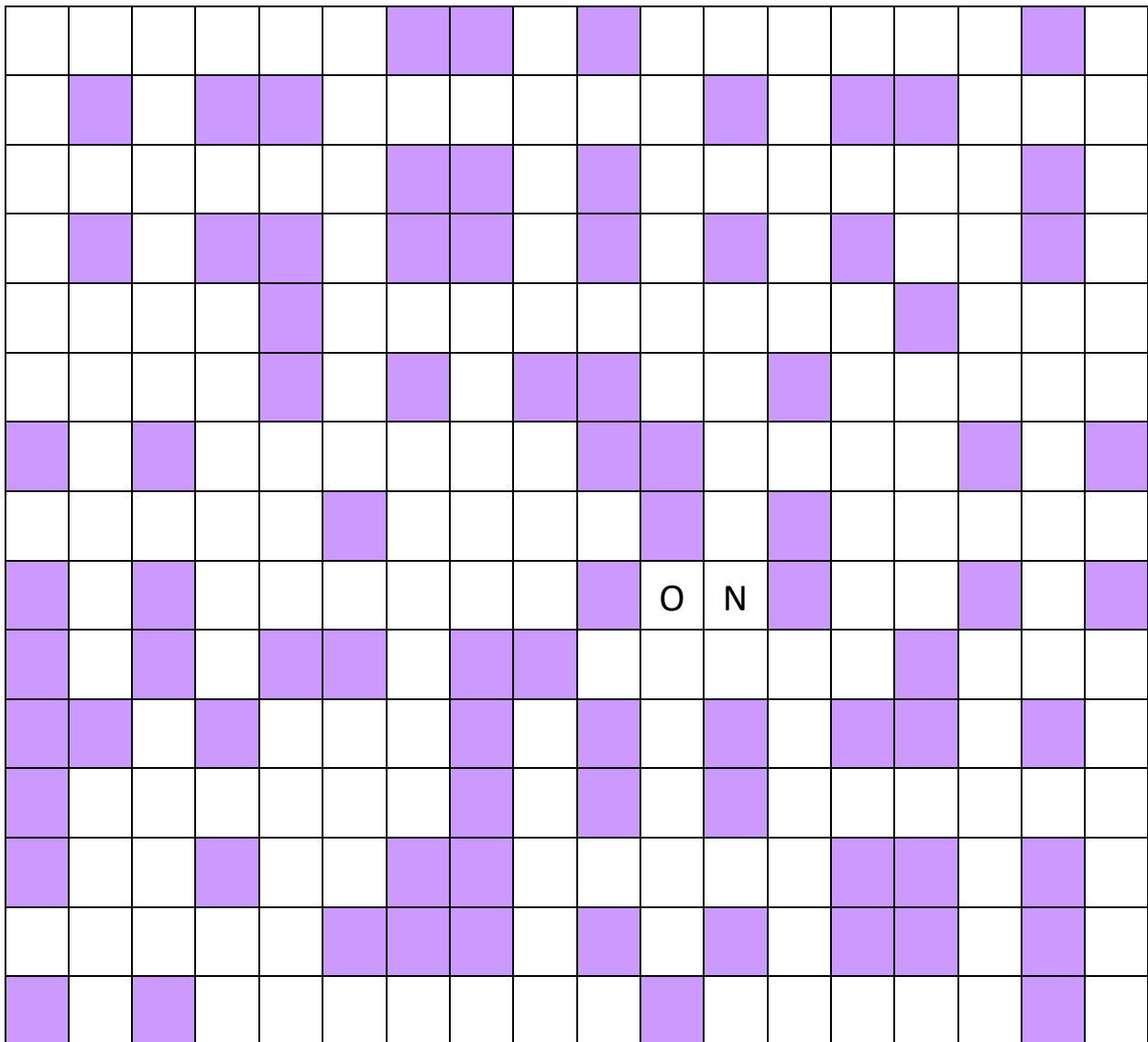




FILL IT IN!

With the exception of one, all the words have been removed from this crossword.

The aim is to return all the data to make a complete version



- EM ALL ALOE ADIEU RACKS ASKING NEEDLE SCRAPS SISTERS ESSENTIAL
- IN ARE ATOM ASPIC SPELL ATTEND ONIONS STOATS SUCCESS
- IS DOE DAFT CORGI STEED ENERGY ORGANS SYMBOL TOASTIE
- IT EAT ETNA EYRES TATIE EXPIRY OTHERS YEASTS
- NO ICE LOGS HORSE TONES HEDGES PARDOE
- OH LOT PAIN MAGMA HOSTEL PLAICE
- ON ODE OASTS IMPORT SADDLE
- SO IODINE
- KISSED
- LASHES
- LOFTED





ORDERING CARDS

By reading through the instructions put the numbers in the correct order.

Using playing cards or numbered cards will make it easier to solve. *None of the numbers are in their actual positions. 1 cannot be the first card, 2 cannot be the second card and so on.*

A: FOUR CARDS = 1 2 3 4

- The even numbers are next to each other.
- The 1 is not next to the 3.

B: FIVE CARDS = 1 2 3 4 5

- The 1 is to the left of 4 but right of 5.
- The 3 is at one end.
- The middle card is an even number
- When multiplied the first and fifth card equal 12.

C: SIX CARDS = 1 2 3 4 5 6

- None of the odd cards are next to each other.
- The 1 is three places away from the 6.
- The two middle cards equal 12 when multiplied together.
- The first and sixth cards equal 7 when added together

D: SEVEN CARDS = 1 2 3 4 5 6 7

- ♦ The 6 is five places away from the 3.
- ♦ The 2, 3, 4 are next to each other.
- ♦ When added the second and third cards equal the fifth card.
- ♦ When added the fifth and sixth cards equal 12.

E: EIGHT CARDS = 1 2 3 4 5 6 7 8

- ♦ The 4 is four places away from the 5.
- ♦ The 6 is six places away from the 7.
- ♦ The 3 is three places away from the 2.
- ♦ The 1 is next to the 8.
- ♦ The answer is five when the third and sixth cards are multiplied.
- ♦ The fourth and fifth cards equal 4 when divided.

SOLUTIONS

DITLOIDS: 26 Letters of the Alphabet, 7 Wonders of the World, 16 Ounces in the Pound, 12 Signs of the Zodiac, 9 Planets in the Solar System, 88 Piano Keys, 13 Stripes on the American Flag, 0 Degrees Celsius at which Water Freezes, 18 Holes on a Gold Course, 90 Degrees in a Right Angle **SIX LETTER WORDS:** dozing, kicked, oxygen, prizes, zebras, chicks **MAKE 24:** there are many combinations. Ask somebody to check them or use a calculator **HAPPY FARMERS:** 7 hamsters 9 doves, 5 rabbits 6 turkeys, 6 chairs 12 stools, 4 hens 6 spiders 8 bees **LETTERED DICE:** ADFSWZ, EHKMVX, CGINUY, BLOPRT **FIND THE VALUE:** 4 7 1 9 12. 11 8 6 3 10, 14 2 13 5 15, 1 12 4 8 5, 7 10 11 9 2, 3 14 6 13 15, 8 13 6 3 1, 3 15 5 10 6, 7 15 4 12 5, 3 10 7 14 1 **CURLY CYCLING:** Julie ABCD=38, Kyle BEDAC=54, Lyn CADEBC=65, Max DABCDE=69, Nina ECDCBA=54 **ANAGRAMS:** celebrate, calendar, seaside, pineapple, education, treetops, mountains, aerosol can, witches, volunteer, gardener, dominoes **ORDERING CARDS:** Four 3421 Five 35214 Six 214365 Seven 2341756 Eight 74182563

