

MIKE WHITTAKER
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EDMONTON, AB.

DECOMPOSITION OF POSITIVE INTEGERS - A, B SEQUENCE (FROM MEMORY)

• ANY POSITIVE INTEGER CAN BE 'DECOMPOSED' INTO A UNIQUE SEQUENCE BY THE APPLICATION OF TWO OPERATIONS:

- IF ODD - MINUS 1 (I CALL THIS OPERATION (A))
- IF EVEN - DIVIDE BY 2 ((B))

NOTE: (A) OCCURS SINGLY BETWEEN ADJACENT (B)'S, BUT, THERE CAN BE A STRING OF (B)'S -

• EXAMPLE 11 (ELEVEN)

11 (-1) = 10

10 (÷2) = 5

5 (-1) = 4

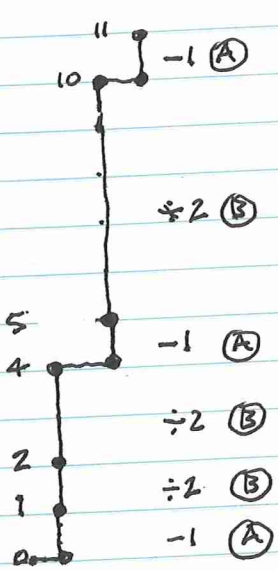
4 (÷2) = 2

2 (÷2) = 1

1 (-1) = 0



• THIS CAN BE WRITTEN AS A STEPPED FIGURE



-1 (A) STEP AT (A) TO SEPARATE (B) SEQUENCES.

THIS IS A UNIQUE SEQUENCE ON ITS OWN, BUT IS ALSO A SUB SEQUENCE OF OTHER SEQUENCES EXTENDING FROM 11 -

EASY TO DECOMPOSE BUT DIFFICULT TO COMPOSE IE: TRAP DOOR.

WHEN THESE ARE GROUPED TOGETHER IT BECOMES A TREE WITH BRANCHES FROM EACH NODE - EACH HAVING NUMERICAL VALUE & POSITION IN Z SPACE.

2012

~~2 4 8 16~~

x	1	2	3	4	5	6	7
x ²	1	4	9	16	25	36	49
	(A)	B 2	A 8	B 8	A 24	B 18	A 48
		B 1	B 4	B 4	B 12	B 9	B 24
		A 0	B 2	B 2	B 6	A 8	B 12
			B 1	B 1	B 3	B 4	B 6
			A 0	A 0	A 2	B 2	B 3
					B 1	B 1	A 2

(x ²)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	B 1	
	(A)	B	(A)	B	(A)	B	(A)	B	(A)	B	(A)	B	(A)	B	(A)	B	(A)	B	(A)	B	(A)	B
		B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
	(A)	B	B	B	(A)	B	B	B	(A)	B	B	B	(A)	B	B	B	(A)	B	B	(A)	B	B
		B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
	(A)	(A)	(A)	B	B	B	B	B	(A)	(A)	(A)	B	B	B	B	B	B	B	B	(A)	(A)	
		B	B	(A)	B	(A)	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
	(A)	(A)	B	(A)	B	(A)	(A)	B	B	B	B	(A)	B	(A)	B	(A)	B	B	(A)	(A)	B	B
		(A)	B	B	B	B	(A)	(A)	B	B	B	(A)	(A)	B	B	B	(A)	(A)	B	(A)	(A)	B
			(A)	(A)	(A)	(A)	B	B	(A)	(A)	B	B	(A)	(A)	B	B	(A)	(A)	B	B	(A)	(A)
			B	B	(A)	B	B	(A)	B	B	(A)	B	B	(A)	B	B	(A)	(A)	B	(A)	(A)	B
			(A)	B	B	B	B	(A)	(A)	B	B	(A)	(A)	B	B	(A)	(A)	B	(A)	(A)	B	(A)
				(A)	B	B	B	(A)	(A)	B	B	(A)	(A)	B	B	(A)	(A)	B	(A)	(A)	B	(A)
					(A)	B	B	(A)	(A)	B	B	(A)	(A)	B	B	(A)	(A)	B	(A)	(A)	B	(A)
						(A)	B	B	(A)	(A)	B	B	(A)	(A)	B	B	(A)	(A)	B	(A)	(A)	B
							(A)	B	B	(A)	(A)	B	B	(A)	(A)	B	B	(A)	(A)	B	(A)	(A)
								(A)	B	B	(A)	(A)	B	B	(A)	(A)	B	B	(A)	(A)	B	(A)
									(A)	B	B	(A)	(A)	B	B	(A)	(A)	B	(A)	(A)	B	(A)
										(A)	B	B	(A)	(A)	B	B	(A)	(A)	B	(A)	(A)	B
											(A)	B	B	(A)	(A)	B	B	(A)	(A)	B	(A)	(A)
												(A)	B	B	(A)	(A)	B	B	(A)	(A)	B	(A)
													(A)	B	B	(A)	(A)	B	(A)	(A)	B	(A)
														(A)	B	B	(A)	(A)	B	(A)	(A)	B
															(A)	B	B	(A)	(A)	B	(A)	(A)
																(A)	B	B	(A)	(A)	B	(A)
																	(A)	B	B	(A)	(A)	B
																		(A)	B	B	(A)	(A)
																			(A)	B	B	(A)
																				(A)	B	B
																					(A)	B
																						(A)

8	9	10	11	12	13			
64	81	100	121	144	169	196	225	256
B 32	A 80	B 50	(A) 120	B 72	(A) 168	B 98	(A) 224	B 128
B 16	B 40	B 25	B 60	B 36	B 84	B 49	B 112	B 64
B 8	B 20	A 24	B 30	B 18	B 42	(A) 48	B 56	B 32
B 4	B 10	B 12	B 15	B 9	B 21	B 24	B 28	B 16
B 2	B 5	B 6	(A) 14	(A) 8	(A) 20	B 12	B 14	B 8
B 1	A 4	B 3	B 7	B 4	B 10	B 6	B 7	B 4
(A)	B 2	A 2	(A) 6	B 2	B 5	B 3	(A) 6	B 2
	B 1	B 1	B 3	B 1	(A) 4	B 2	B 3	B 1
	A 0	A 0	(A) 2	(A) 0	B 2	(A) 2	B 3	B 1
			B 1		B 1	B 1	(A) 2	A 0
			(A) 0		(A) 0	(A) 0	B 1	

NOTE = DID THIS BY HAND - SO MAYBE A MISTAKE SOMEWHERE
 I GUESS THIS IS WHERE COMPUTERS ARE HANDY -
 I SEEM TO REMEMBER THE SYMMETRY / ASYMMETRY
 NOT INTERESTING Mike