

Practical 2

Convert the number of days in a leap year
366¹⁰ to Base 2

Part A

Xn	number	count	remainder	running total	binary	running total
2 ⁸	256	1	110	256	100000000	100000000
2 ⁷	128	0	110	256	000000000	100000000
2 ⁶	64	1	46	320	001000000	101000000
2 ⁵	32	1	14	352	000100000	101100000
2 ⁴	16	0	14	352	000000000	101100000
2 ³	8	1	6	360	000001000	101101000
2 ²	4	1	2	364	000000100	101101010
2 ¹	2	1	0	366	000000010	101101011
2 ⁰	1	1	0	367	000000001	101101011

366¹⁰ to binary = 101101011

2 ¹⁵	32768	1	12232	32768	100000000	100000000
Xn	number	count	remainder	running total	binary	running total
2 ¹⁴	16384	0	12232	32768	000000000	100000000
2 ¹³	8192	1	4040	40960	001000000	101000000
2 ¹²	4096	0	4040	40960		
2 ¹¹						
2 ¹⁰						
2 ⁹						
2 ⁸						
2 ⁷						
2 ⁶						
2 ⁵						
2 ⁴						
2 ³						
2 ²						
2 ¹						
2 ⁰						