

Práctica 1

a) 89113

2^{13}	2^{12}	2^{11}	2^{10}	2^9	2^8	2^7	2^6	2^5	2^4	2^3	2^2	2^1	2^0	
131072	65536	32768	16384	8192	4096	2048	1024	512	256	128	64	32	16	
0	1	1	0	1	0	1	1	1	0	0	0	0	1	1
1	1			5				6				1		9
	2			5				6				3		1

$$89113_{10} = 65536_{10} + 16384_{10} + 4096_{10} + 2048_{10} + 1024_{10} + 16_{10} + 8_{10} + 1_{10}$$

$$89113_{10} = (10101110000011001)_2$$

$$89113_{10} = (15C19)_{16}$$

$$89113_{10} = (256031)_8$$

b) 5313

2^{13}	2^{12}	2^{11}	2^{10}	2^9	2^8	2^7	2^6	2^5	2^4	2^3	2^2	2^1	2^0
8192	4096	2048	1024	512	256	128	64	32	16	8	4	2	1
0	1	1	0	1	0	0	1	1	0	0	0	0	1
1				4				11				1	
1			2			3		0				1	

$$5313_{10} = 4096_{10} + 1024_{10} + 128_{10} + 64_{10} + 1_{10}$$

$$5313_{10} = (1010011000001)_2$$

$$5313_{10} = (14C1)_{16}$$

$$5313_{10} = (12301)_8$$

c) 825

2^{10}	2^9	2^8	2^7	2^6	2^5	2^4	2^3	2^2	2^1	2^0
1024	512	256	128	64	32	16	8	4	2	1
0	1	1	0	0	1	1	1	0	0	1
	31			15			7	4		1
	1			4			7			1

$$825_{10} = 512_{10} + 256_{10} + 32_{10} + 16_{10} + 1_{10}$$

$$825_{10} = (1100111001)_2$$

$$825_{10} = (339)_{16}$$

$$825_{10} = (1471)_8$$

d) 10749

2^{14}	2^{13}	2^{12}	2^{11}	2^{10}	2^9	2^8	2^7	2^6	2^5	2^4	2^3	2^2	2^1	2^0
16384	8192	4096	2048	1024	512	256	128	64	32	16	8	4	2	1
0	1	0	1	0	0	1	1	1	1	1	1	1	0	1
	2				9			15					5	
	2				4			7					5	

$$10749_{10} = 8192_{10} + 2048_{10} + 256_{10} + 128_{10} + 64_{10} + 32_{10} + 16_{10} + 8_{10} + 4_{10} + 1_{10}$$

$$10749_{10} = (01010011111101)_2$$

$$10749_{10} = (29FD)_{16}$$

$$10749_{10} = (24775)_8$$

c) 296681

2^{18}	2^{17}	2^{16}	2^{15}	2^{14}	2^{13}	2^{12}	2^{11}	2^{10}	2^9	2^8	2^7	2^6	2^5	2^4	2^3	2^2	2^1	2^0
262144	131072	65536	32768	16384	8192	4096	2048	1024	512	256	128	64	32	16	8	4	2	1
1	0	0	1	0	0	0	0	1	1	0	1	1	1	0	1	0	0	1
$\underbrace{1}_{1} \quad \underbrace{1 \quad 4}_{1} \quad \underbrace{1 \quad 8}_{0} \quad \underbrace{1 \quad 6}_{3} \quad \underbrace{1 \quad 3}_{3} \quad \underbrace{1 \quad 5}_{5} \quad \underbrace{1 \quad 1}_{1}$																		

$$296681_{10} = 262144_{10} + 32768_{10} + 1024_{10} + 512_{10} + 128_{10} + 64_{10} + 32_{10} + 8_{10} + 1_{10}$$

$$296681_{10} = (1001000011011101001)_2$$

$$296681_{10} = (486E9)_{16}$$

$$296681_{10} = (1103351)_8$$

f) 2349

2^{12}	2^{11}	2^{10}	2^9	2^8	2^7	2^6	2^5	2^4	2^3	2^2	2^1	2^0
4096	2048	1024	512	256	128	64	32	16	8	4	2	1
0	1	0	0	1	0	0	1	0	1	1	0	1
<div><div>1</div><div>4</div><div>1</div><div>4</div><div>2</div><div>5</div><div>1</div><div>5</div></div>												

$$2349_{10} = 2048_{10} + 256_{10} + 32_{10} + 8_{10} + 4_{10} + 1_{10}$$

$$2349_{10} = (100100101101)_2$$

$$2349_{10} = (92D)_{16}$$

$$2349_{10} = (4455)_8$$

g) 92837

2^{16}	2^{15}	2^{14}	2^{13}	2^{12}	2^{11}	2^{10}	2^9	2^8	2^7	2^6	2^5	2^4	2^3	2^2	2^1	2^0
65536	32768	16384	8192	4096	2048	1024	512	256	128	64	32	16	8	4	2	1
1	1	0	1	0	1	0	1	0	1	0	1	0	0	1	0	1
$\underbrace{1 \quad 1}_{2} \quad \underbrace{1 \quad 6}_{6} \quad \underbrace{1 \quad 5}_{5} \quad \underbrace{1 \quad 2}_{2} \quad \underbrace{1 \quad 4}_{4} \quad \underbrace{1 \quad 5}_{5}$																

$$92837_{10} = 65536_{10} + 16384_{10} + 8192_{10} + 2048_{10} + 512_{10} + 128_{10} + 32_{10} + 4_{10} + 1_{10}$$

$$92837_{10} = (101101010100101)_2, 92837_{10} = (16A45)_{16}$$

$$92837_{10} = (265745)_8$$

2 ¹⁸	2 ¹⁵	2 ¹²	2 ⁹	2 ⁶	2 ³	2 ⁰	2 ¹⁸	2 ¹⁵	2 ¹²	2 ⁹	2 ⁶	2 ³	2 ⁰	2 ¹⁸	2 ¹⁵	2 ¹²	2 ⁹	2 ⁶	2 ³	2 ⁰
384	24	15	9	5	3	2	8192	4096	2048	1024	512	256	128	64	32	16	8	4	2	1
2 ¹⁸	2 ¹⁵	2 ¹²	2 ⁹	2 ⁶	2 ³	2 ⁰	1	1	0	0	1	0	1	1	1	0	0	0	0	1

Handwritten notes showing a sequence of numbers and symbols, possibly representing a sequence or a set of data points. The sequence includes numbers 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100. The sequence is written in a cursive style with some numbers and symbols (like 'F', 'L', '1', '2', '3', '4', '5', '6', '7', '8', '9', '10', '11', '12', '13', '14', '15', '16', '17', '18', '19', '20', '21', '22', '23', '24', '25', '26', '27', '28', '29', '30', '31', '32', '33', '34', '35', '36', '37', '38', '39', '40', '41', '42', '43', '44', '45', '46', '47', '48', '49', '50', '51', '52', '53', '54', '55', '56', '57', '58', '59', '60', '61', '62', '63', '64', '65', '66', '67', '68', '69', '70', '71', '72', '73', '74', '75', '76', '77', '78', '79', '80', '81', '82', '83', '84', '85', '86', '87', '88', '89', '90', '91', '92', '93', '94', '95', '96', '97', '98', '99', '100') written in a cursive style. The sequence is written in a cursive style with some numbers and symbols (like 'F', 'L', '1', '2', '3', '4', '5', '6', '7', '8', '9', '10', '11', '12', '13', '14', '15', '16', '17', '18', '19', '20', '21', '22', '23', '24', '25', '26', '27', '28', '29', '30', '31', '32', '33', '34', '35', '36', '37', '38', '39', '40', '41', '42', '43', '44', '45', '46', '47', '48', '49', '50', '51', '52', '53', '54', '55', '56', '57', '58', '59', '60', '61', '62', '63', '64', '65', '66', '67', '68', '69', '70', '71', '72', '73', '74', '75', '76', '77', '78', '79', '80', '81', '82', '83', '84', '85', '86', '87', '88', '89', '90', '91', '92', '93', '94', '95', '96', '97', '98', '99', '100') written in a cursive style.

$$783073_{10} = 574288_{10} + 1307406 \times 10^{-6} + 1307406 \times 10^{-6} + 1307406 \times 10^{-6}$$

$783073_{10} = (10111100101100)_2$

$$783073_{10} = (BFZE1)_{16}$$

$$783073_{10} = (7771341)_8$$

2 ¹⁶	7 ¹⁵	2 ¹⁴	2 ¹³	2 ¹²	2 ¹¹	2 ¹⁰	2 ⁹	2 ⁸	2 ⁷	2 ⁶	2 ⁵	2 ⁴	2 ³	2 ²	2 ¹	2 ⁰
5536	37268	16384	8192	4096	2048	1024	512	256	128	64	32	16	8	4	2	1

$$\begin{array}{cccccccccccccccc} 1 & 1 & 0 & 1 & 0 & 1 & 0 & 0 & 1 & 0 & 0 & 1 & 0 & 0 \\ 1 & 1 & 5 & 1 & 4 & 1 & 9 & 1 & 4 \\ 2 & 5 & 2 & 3 & 1 & 4 \end{array}$$

$$87244_{10} = 65536_{10} + 16384_{10} + 4096_{10} + 1074_{10} + 128_{10} + 64_{10} + 8_{10} + 4_{10}$$

$$87244_{10} = (10101010011001100)_2$$

$$87244_{10} = (1540C)_{16}$$

$$87244_{10} = (252314)_8$$

2^{14}	2^{13}	2^{12}	2^{11}	2^{10}	2^9	2^8	2^7	2^6	2^5	2^4	2^3	2^2	2^1	2^0
6384	8192	4096	2048	1024	512	256	128	64	32	16	8	4	2	1

1 1 0 1 0 1 1 0 1 0 0 1 1 0 1 1

6 1 6 1 9 3 3

6 3 2 3 3

$$126267_{10} = 16384_{10} + 8192_{10} + 1024_{10} + 512_{10} + 128_{10} + 16_{10} + 8_{10} + 2_{10} + 1_{10}$$

$$26267_{10} = (110011010011011)_2, 26267_{10} = (669B)_{16}$$

$$26267_{10} = (63233)_8$$

4) 050595

2^{15}	2^{14}	2^{13}	2^{12}	2^{11}	2^{10}	2^9	2^8	2^7	2^6	2^5	2^4	2^3	2^2	2^1	2^0
32768	16384	8192	4096	2048	1024	512	256	128	64	32	16	8	4	2	1
1	1	0	0	1	0	1	1	1	0	1	0	0	0	1	1
	11			1		5	11		6	11			4		3
1		4			2										

$$050595_{10} = 32768_{10} + 16384_{10} + 1024_{10} + 256_{10} + 128_{10} + 32_{10} + 2_{10} + 1_{10}$$

$$050595_{10} = (1100010110100011)_2$$

$$050595_{10} = (C5A3)_{16}$$

$$050595_{10} = (142643)_8$$

5) 52263

2^{15}	2^{14}	2^{13}	2^{12}	2^{11}	2^{10}	2^9	2^8	2^7	2^6	2^5	2^4	2^3	2^2	2^1	2^0
32768	16384	8192	4096	2048	1024	512	256	128	64	32	16	8	4	2	1
1	1	0	0	1	1	0	0	0	0	1	0	0	1	1	1
	11			1		6			0		4		7		7
1		4			6										

$$52263_{10} = 32768_{10} + 16384_{10} + 2048_{10} + 1024_{10} + 32_{10} + 9_{10} + 2_{10} + 1_{10}$$

$$52263_{10} = (1100110000100111)_2$$

$$52263_{10} = (CC27)_{16}$$

$$52263_{10} = (146047)_8$$

6) 49720

2^{15}	2^{14}	2^{13}	2^{12}	2^{11}	2^{10}	2^9	2^8	2^7	2^6	2^5	2^4	2^3	2^2	2^1	2^0
32768	16384	8192	4096	2048	1024	512	256	128	64	32	16	8	4	2	1
1	1	0	0	1	0	0	1	0	0	0	1	1	1	0	0
	11			1		2	11		3	11			7		0
1		4			2				6				7		

$$49720_{10} = 32768_{10} + 16384_{10} + 512_{10} + 32_{10} + 16_{10} + 8_{10}$$

$$49720_{10} = (1100001000111000)_2$$

$$49720_{10} = (C238)_{16}$$

$$49720_{10} = (141070)_8$$