



Nombre de la práctica	Conversión de números decimales a binarios			No.	1
Asignatura:	Matemáticas Discretas	Carrera:	Ingeniería sistemas	en	Duración de la práctica (Hrs)
					5

Nombre: Miguel Angel Cruz Vega

Grupo: 3102

I. Competencia(s) específica(s): capacidad de aplicar los conocimientos en la practica

II. Lugar de realización de la práctica (laboratorio, taller, aula u otro): Casa

III. Material empleado:

Hojas, bolígrafo, lápiz, goma, saca puntas

IV. Desarrollo de la práctica:



Conversión de números
decimales a binarios.

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$$(349)_{10} = (101011101)_2$$

$$\begin{aligned} 349 \div 2 &= 174 & R=1 \\ 174 \div 2 &= 87 & R=0 \\ 87 \div 2 &= 43 & R=1 \\ 43 \div 2 &= 21 & R=1 \\ 21 \div 2 &= 10 & R=1 \\ 10 \div 2 &= 5 & R=0 \\ 5 \div 2 &= 2 & R=1 \\ 2 \div 2 &= 1 & R=0 \end{aligned}$$

$$(357)_{10} = (101100101)_2$$

$$\begin{aligned} 357 \div 2 &= 178 & R=1 \\ 178 \div 2 &= 89 & R=0 \\ 89 \div 2 &= 44 & R=1 \\ 44 \div 2 &= 22 & R=0 \\ 22 \div 2 &= 11 & R=0 \\ 11 \div 2 &= 5 & R=1 \\ 5 \div 2 &= 2 & R=1 \\ 2 \div 2 &= 1 & R=0 \end{aligned}$$

$$(497)_{10} = (111110001)_2$$

$$\begin{aligned} 497 \div 2 &= 248 & R=1 \\ 248 \div 2 &= 124 & R=0 \\ 124 \div 2 &= 62 & R=0 \\ 62 \div 2 &= 31 & R=0 \\ 31 \div 2 &= 15 & R=1 \\ 15 \div 2 &= 7 & R=1 \\ 7 \div 2 &= 3 & R=1 \\ 3 \div 2 &= 1 & R=1 \end{aligned}$$

$$(65)_{10} = (1000001)_2$$

$$\begin{aligned} 65 \div 2 &= 32 & R=1 \\ 32 \div 2 &= 16 & R=0 \\ 16 \div 2 &= 8 & R=0 \\ 8 \div 2 &= 4 & R=0 \\ 4 \div 2 &= 2 & R=0 \\ 2 \div 2 &= 1 & R=0 \end{aligned}$$

$$(329)_{10} = (101001001)_2$$

$$\begin{aligned} 329 \div 2 &= 164 & R=1 \\ 164 \div 2 &= 82 & R=0 \\ 82 \div 2 &= 41 & R=0 \\ 41 \div 2 &= 20 & R=1 \\ 20 \div 2 &= 10 & R=0 \\ 10 \div 2 &= 5 & R=0 \\ 5 \div 2 &= 2 & R=1 \\ 2 \div 2 &= 1 & R=0 \end{aligned}$$

$$(417)_{10} = (110100001)_2$$

$$\begin{aligned} 417 \div 2 &= 208 & R=1 \\ 208 \div 2 &= 104 & R=0 \\ 104 \div 2 &= 52 & R=0 \\ 52 \div 2 &= 26 & R=0 \\ 26 \div 2 &= 13 & R=0 \\ 13 \div 2 &= 6 & R=1 \\ 6 \div 2 &= 3 & R=0 \\ 3 \div 2 &= 1 & R=1 \end{aligned}$$

$$(281)_{10} = (100011001)_2$$

$$\begin{aligned} 281 \div 2 &= 140 & R=1 \\ 140 \div 2 &= 70 & R=0 \\ 70 \div 2 &= 35 & R=0 \\ 35 \div 2 &= 17 & R=1 \\ 17 \div 2 &= 8 & R=1 \\ 8 \div 2 &= 4 & R=0 \\ 4 \div 2 &= 2 & R=0 \\ 2 \div 2 &= 1 & R=0 \end{aligned}$$

$$(361)_{10} = (101101001)_2$$

$$\begin{aligned} 361 \div 2 &= 180 & R=1 \\ 180 \div 2 &= 90 & R=0 \\ 90 \div 2 &= 45 & R=0 \\ 45 \div 2 &= 22 & R=1 \\ 22 \div 2 &= 11 & R=0 \\ 11 \div 2 &= 5 & R=1 \\ 5 \div 2 &= 2 & R=1 \\ 2 \div 2 &= 1 & R=0 \end{aligned}$$

$$(5)_{10} = (101)_2$$

$$\begin{aligned} 5 \div 2 &= 2 & R=1 \\ 2 \div 2 &= 1 & R=0 \end{aligned}$$

$$(73)_{10} = (1001001)_2$$

$$\begin{aligned} 73 \div 2 &= 36 & R=1 \\ 36 \div 2 &= 18 & R=0 \\ 18 \div 2 &= 9 & R=0 \\ 9 \div 2 &= 4 & R=1 \\ 4 \div 2 &= 2 & R=0 \\ 2 \div 2 &= 1 & R=0 \end{aligned}$$

$$(369)_{10} = (101110001)_2$$

$$\begin{aligned} 369 \div 2 &= 184 & R=1 \\ 184 \div 2 &= 92 & R=0 \\ 92 \div 2 &= 46 & R=0 \\ 46 \div 2 &= 23 & R=0 \\ 23 \div 2 &= 11 & R=1 \\ 11 \div 2 &= 5 & R=1 \\ 5 \div 2 &= 2 & R=1 \\ 2 \div 2 &= 1 & R=0 \end{aligned}$$

$$(48)_{10} = (111100001)_2$$

$$\begin{aligned} 48 \div 2 &= 24 & R=0 \\ 24 \div 2 &= 12 & R=0 \\ 12 \div 2 &= 6 & R=0 \\ 6 \div 2 &= 3 & R=0 \\ 3 \div 2 &= 1 & R=1 \\ 1 \div 2 &= 0 & R=1 \end{aligned}$$

$$(109)_{10} = (1101101)_2$$

$$\begin{aligned} 109 \div 2 &= 54 & R=1 \\ 54 \div 2 &= 27 & R=0 \\ 27 \div 2 &= 13 & R=1 \\ 13 \div 2 &= 6 & R=1 \\ 6 \div 2 &= 3 & R=0 \\ 3 \div 2 &= 1 & R=1 \end{aligned}$$



$$(17)_{10} = (10100007)_2$$

$$\begin{aligned} 17 \div 2 &= 8 \quad R=1 \\ 8 \div 2 &= 4 \quad R=0 \\ 4 \div 2 &= 2 \quad R=0 \\ 2 \div 2 &= 1 \quad R=0 \\ 1 \div 2 &= 0 \quad R=1 \\ 0 \div 2 &= 0 \quad R=0 \\ 0 \div 2 &= 0 \quad R=0 \\ 0 \div 2 &= 0 \quad R=0 \end{aligned}$$

$$(69)_{10} = (1000101)_2$$

$$\begin{aligned} 69 \div 2 &= 34 \quad R=1 \\ 34 \div 2 &= 17 \quad R=0 \\ 17 \div 2 &= 8 \quad R=1 \\ 8 \div 2 &= 4 \quad R=0 \\ 4 \div 2 &= 2 \quad R=0 \\ 2 \div 2 &= 1 \quad R=0 \end{aligned}$$

$$(149)_{10} = (10010101)_2$$

$$\begin{aligned} 149 \div 2 &= 74 \quad R=1 \\ 74 \div 2 &= 37 \quad R=0 \\ 37 \div 2 &= 18 \quad R=1 \\ 18 \div 2 &= 9 \quad R=0 \\ 9 \div 2 &= 4 \quad R=1 \\ 4 \div 2 &= 2 \quad R=0 \\ 2 \div 2 &= 1 \quad R=0 \end{aligned}$$

$$(141)_{10} = (10001101)_2$$

$$\begin{aligned} 141 \div 2 &= 70 \quad R=1 \\ 70 \div 2 &= 35 \quad R=0 \\ 35 \div 2 &= 17 \quad R=1 \\ 17 \div 2 &= 8 \quad R=1 \\ 8 \div 2 &= 4 \quad R=0 \\ 4 \div 2 &= 2 \quad R=0 \\ 2 \div 2 &= 1 \quad R=0 \end{aligned}$$

$$(97)_{10} = (1100001)_2$$

$$\begin{aligned} 97 \div 2 &= 48 \quad R=1 \\ 48 \div 2 &= 24 \quad R=0 \\ 24 \div 2 &= 12 \quad R=0 \\ 12 \div 2 &= 6 \quad R=0 \\ 6 \div 2 &= 3 \quad R=0 \\ 3 \div 2 &= 1 \quad R=1 \end{aligned}$$

$$(41)_{10} = (101001)_2$$

$$\begin{aligned} 41 \div 2 &= 20 \quad R=1 \\ 20 \div 2 &= 10 \quad R=0 \\ 10 \div 2 &= 5 \quad R=0 \\ 5 \div 2 &= 2 \quad R=1 \\ 2 \div 2 &= 1 \quad R=0 \end{aligned}$$

$$(373)_{10} = (101001101)_2$$

$$\begin{aligned} 373 \div 2 &= 186 \quad R=1 \\ 186 \div 2 &= 93 \quad R=0 \\ 93 \div 2 &= 46 \quad R=1 \\ 46 \div 2 &= 23 \quad R=0 \\ 23 \div 2 &= 11 \quad R=1 \\ 11 \div 2 &= 5 \quad R=1 \\ 5 \div 2 &= 2 \quad R=1 \\ 2 \div 2 &= 1 \quad R=0 \end{aligned}$$

$$(13)_{10} = (1101)_2$$

$$\begin{aligned} 13 \div 2 &= 6 \quad R=1 \\ 6 \div 2 &= 3 \quad R=0 \\ 3 \div 2 &= 1 \quad R=1 \end{aligned}$$

$$(409)_{10} = (110011011)_2$$

$$\begin{aligned} 409 \div 2 &= 204 \quad R=1 \\ 204 \div 2 &= 102 \quad R=0 \\ 102 \div 2 &= 51 \quad R=0 \\ 51 \div 2 &= 25 \quad R=1 \\ 25 \div 2 &= 12 \quad R=1 \\ 12 \div 2 &= 6 \quad R=0 \\ 6 \div 2 &= 3 \quad R=0 \\ 3 \div 2 &= 1 \quad R=1 \end{aligned}$$

$$(65)_{10} = (1000001)_2$$

$$\begin{aligned} 65 \div 2 &= 32 \quad R=1 \\ 32 \div 2 &= 16 \quad R=0 \\ 16 \div 2 &= 8 \quad R=0 \\ 8 \div 2 &= 4 \quad R=0 \\ 4 \div 2 &= 2 \quad R=0 \\ 2 \div 2 &= 1 \quad R=0 \end{aligned}$$

$$(269)_{10} = (10001101)_2$$

$$\begin{aligned} 269 \div 2 &= 134 \quad R=1 \\ 134 \div 2 &= 67 \quad R=0 \\ 67 \div 2 &= 33 \quad R=1 \\ 33 \div 2 &= 16 \quad R=1 \\ 16 \div 2 &= 8 \quad R=0 \\ 8 \div 2 &= 4 \quad R=0 \\ 4 \div 2 &= 2 \quad R=0 \\ 2 \div 2 &= 1 \quad R=0 \end{aligned}$$

$$(185)_{10} = (1000001001)_2$$

$$\begin{aligned} 185 \div 2 &= 92 \quad R=1 \\ 92 \div 2 &= 46 \quad R=0 \\ 46 \div 2 &= 23 \quad R=0 \\ 23 \div 2 &= 11 \quad R=1 \\ 11 \div 2 &= 5 \quad R=1 \\ 5 \div 2 &= 2 \quad R=1 \\ 2 \div 2 &= 1 \quad R=0 \end{aligned}$$

$$(153)_{10} = (10011001)_2$$

$$\begin{aligned} 153 \div 2 &= 76 \quad R=1 \\ 76 \div 2 &= 38 \quad R=0 \\ 38 \div 2 &= 19 \quad R=0 \\ 19 \div 2 &= 9 \quad R=1 \\ 9 \div 2 &= 4 \quad R=1 \\ 4 \div 2 &= 2 \quad R=0 \\ 2 \div 2 &= 1 \quad R=0 \end{aligned}$$

$$(401)_{10} = (110010001)_2$$

$$\begin{aligned} 401 \div 2 &= 200 \quad R=1 \\ 200 \div 2 &= 100 \quad R=0 \\ 100 \div 2 &= 50 \quad R=0 \\ 50 \div 2 &= 25 \quad R=0 \\ 25 \div 2 &= 12 \quad R=1 \\ 12 \div 2 &= 6 \quad R=0 \\ 6 \div 2 &= 3 \quad R=0 \\ 3 \div 2 &= 1 \quad R=1 \end{aligned}$$

$$(461)_{10} = (111001101)_2$$

$$\begin{aligned} 461 \div 2 &= 230 \quad R=1 \\ 230 \div 2 &= 115 \quad R=0 \\ 115 \div 2 &= 57 \quad R=1 \\ 57 \div 2 &= 28 \quad R=1 \\ 28 \div 2 &= 14 \quad R=0 \\ 14 \div 2 &= 7 \quad R=0 \\ 7 \div 2 &= 3 \quad R=1 \\ 3 \div 2 &= 1 \quad R=1 \end{aligned}$$

$$(17)_{10} = (1001)_2$$

$$\begin{aligned} 17 \div 2 &= 8 \quad R=1 \\ 8 \div 2 &= 4 \quad R=0 \\ 4 \div 2 &= 2 \quad R=0 \\ 2 \div 2 &= 1 \quad R=1 \end{aligned}$$

$$(157)_{10} = (1001111)_2$$

$$\begin{aligned} 157 \div 2 &= 78 \quad R=1 \\ 78 \div 2 &= 39 \quad R=0 \\ 39 \div 2 &= 19 \quad R=1 \\ 19 \div 2 &= 9 \quad R=1 \\ 9 \div 2 &= 4 \quad R=1 \\ 4 \div 2 &= 2 \quad R=0 \\ 2 \div 2 &= 1 \quad R=0 \end{aligned}$$

$$(165)_{10} = (10100101)_2$$

$$\begin{aligned} 165 \div 2 &= 82 \quad R=1 \\ 82 \div 2 &= 41 \quad R=0 \\ 41 \div 2 &= 20 \quad R=1 \\ 20 \div 2 &= 10 \quad R=0 \\ 10 \div 2 &= 5 \quad R=0 \\ 5 \div 2 &= 2 \quad R=1 \\ 2 \div 2 &= 1 \quad R=0 \end{aligned}$$

$$(441)_{10} = (11011100)_2$$

$$\begin{aligned} 441 \div 2 &= 220 \quad R=1 \\ 220 \div 2 &= 110 \quad R=0 \\ 110 \div 2 &= 55 \quad R=0 \\ 55 \div 2 &= 27 \quad R=1 \\ 27 \div 2 &= 13 \quad R=1 \\ 13 \div 2 &= 6 \quad R=1 \\ 6 \div 2 &= 3 \quad R=0 \\ 3 \div 2 &= 1 \quad R=1 \end{aligned}$$



$(85)_{10} = (1010101)_2$ $85 \div 2 = 42 \quad R=1$ $42 \div 2 = 21 \quad R=0$ $21 \div 2 = 10 \quad R=1$ $10 \div 2 = 5 \quad R=0$ $5 \div 2 = 2 \quad R=1$ $2 \div 2 = 1 \quad R=0$	$(235)_{10} = (11101001)_2$ $235 \div 2 = 117 \quad R=1$ $117 \div 2 = 58 \quad R=0$ $58 \div 2 = 29 \quad R=0$ $29 \div 2 = 14 \quad R=1$ $14 \div 2 = 7 \quad R=0$ $7 \div 2 = 3 \quad R=1$ $3 \div 2 = 1 \quad R=1$	$(257)_{10} = (10000001)_2$ $257 \div 2 = 128 \quad R=1$ $128 \div 2 = 64 \quad R=0$ $64 \div 2 = 32 \quad R=0$ $32 \div 2 = 16 \quad R=0$ $16 \div 2 = 8 \quad R=0$ $8 \div 2 = 4 \quad R=0$ $4 \div 2 = 2 \quad R=0$ $2 \div 2 = 1 \quad R=0$	$(445)_{10} = (11011101)_2$ $445 \div 2 = 222 \quad R=1$ $222 \div 2 = 111 \quad R=0$ $111 \div 2 = 55 \quad R=1$ $55 \div 2 = 27 \quad R=1$ $27 \div 2 = 13 \quad R=1$ $13 \div 2 = 6 \quad R=1$ $6 \div 2 = 3 \quad R=0$ $3 \div 2 = 1 \quad R=1$
$(133)_{10} = (10011001)_2$ $133 \div 2 = 66 \quad R=1$ $66 \div 2 = 33 \quad R=0$ $33 \div 2 = 16 \quad R=1$ $16 \div 2 = 8 \quad R=0$ $8 \div 2 = 4 \quad R=0$ $4 \div 2 = 2 \quad R=0$ $2 \div 2 = 1 \quad R=0$	$(305)_{10} = (100110001)_2$ $305 \div 2 = 152 \quad R=1$ $152 \div 2 = 76 \quad R=0$ $76 \div 2 = 38 \quad R=0$ $38 \div 2 = 19 \quad R=0$ $19 \div 2 = 9 \quad R=1$ $9 \div 2 = 4 \quad R=1$ $4 \div 2 = 2 \quad R=0$ $2 \div 2 = 1 \quad R=0$	$(177)_{10} = (10110001)_2$ $177 \div 2 = 88 \quad R=1$ $88 \div 2 = 44 \quad R=0$ $44 \div 2 = 22 \quad R=0$ $22 \div 2 = 11 \quad R=0$ $11 \div 2 = 5 \quad R=1$ $5 \div 2 = 2 \quad R=1$ $2 \div 2 = 1 \quad R=0$	$(485)_{10} = (111100101)_2$ $485 \div 2 = 242 \quad R=1$ $242 \div 2 = 121 \quad R=0$ $121 \div 2 = 60 \quad R=1$ $60 \div 2 = 30 \quad R=0$ $30 \div 2 = 15 \quad R=0$ $15 \div 2 = 7 \quad R=1$ $7 \div 2 = 3 \quad R=1$ $3 \div 2 = 1 \quad R=1$
$(353)_{10} = (101100001)_2$ $353 \div 2 = 176 \quad R=1$ $176 \div 2 = 88 \quad R=0$ $88 \div 2 = 44 \quad R=0$ $44 \div 2 = 22 \quad R=0$ $22 \div 2 = 11 \quad R=0$ $11 \div 2 = 5 \quad R=1$ $5 \div 2 = 2 \quad R=1$ $2 \div 2 = 1 \quad R=0$	$(289)_{10} = (100100001)_2$ $289 \div 2 = 144 \quad R=1$ $144 \div 2 = 72 \quad R=0$ $72 \div 2 = 36 \quad R=0$ $36 \div 2 = 18 \quad R=0$ $18 \div 2 = 9 \quad R=0$ $9 \div 2 = 4 \quad R=1$ $4 \div 2 = 2 \quad R=0$ $2 \div 2 = 1 \quad R=0$	$(169)_{10} = (10101001)_2$ $169 \div 2 = 84 \quad R=1$ $84 \div 2 = 42 \quad R=0$ $42 \div 2 = 21 \quad R=0$ $21 \div 2 = 10 \quad R=1$ $10 \div 2 = 5 \quad R=0$ $5 \div 2 = 2 \quad R=1$ $2 \div 2 = 1 \quad R=0$	$(489)_{10} = (111101001)_2$ $489 \div 2 = 244 \quad R=1$ $244 \div 2 = 122 \quad R=0$ $122 \div 2 = 61 \quad R=0$ $61 \div 2 = 30 \quad R=1$ $30 \div 2 = 15 \quad R=0$ $15 \div 2 = 7 \quad R=1$ $7 \div 2 = 3 \quad R=1$ $3 \div 2 = 1 \quad R=1$
$(61)_{10} = (11101)_2$ $61 \div 2 = 30 \quad R=1$ $30 \div 2 = 15 \quad R=0$ $15 \div 2 = 7 \quad R=1$ $7 \div 2 = 3 \quad R=1$ $3 \div 2 = 1 \quad R=1$	$(297)_{10} = (100101001)_2$ $297 \div 2 = 148 \quad R=1$ $148 \div 2 = 74 \quad R=0$ $74 \div 2 = 37 \quad R=0$ $37 \div 2 = 18 \quad R=1$ $18 \div 2 = 9 \quad R=0$ $9 \div 2 = 4 \quad R=1$ $4 \div 2 = 2 \quad R=0$ $2 \div 2 = 1 \quad R=0$	$(315)_{10} = (100111001)_2$ $315 \div 2 = 157 \quad R=1$ $157 \div 2 = 78 \quad R=0$ $78 \div 2 = 39 \quad R=0$ $39 \div 2 = 19 \quad R=1$ $19 \div 2 = 9 \quad R=1$ $9 \div 2 = 4 \quad R=1$ $4 \div 2 = 2 \quad R=0$ $2 \div 2 = 1 \quad R=0$	$(173)_{10} = (10101101)_2$ $173 \div 2 = 86 \quad R=1$ $86 \div 2 = 43 \quad R=0$ $43 \div 2 = 21 \quad R=1$ $21 \div 2 = 10 \quad R=1$ $10 \div 2 = 5 \quad R=0$ $5 \div 2 = 2 \quad R=1$ $2 \div 2 = 1 \quad R=0$
$(137)_{10} = (10001001)_2$ $137 \div 2 = 68 \quad R=1$ $68 \div 2 = 34 \quad R=0$ $34 \div 2 = 17 \quad R=0$ $17 \div 2 = 8 \quad R=1$ $8 \div 2 = 4 \quad R=0$ $4 \div 2 = 2 \quad R=0$ $2 \div 2 = 1 \quad R=0$	$(321)_{10} = (101000001)_2$ $321 \div 2 = 160 \quad R=1$ $160 \div 2 = 80 \quad R=0$ $80 \div 2 = 40 \quad R=0$ $40 \div 2 = 20 \quad R=0$ $20 \div 2 = 10 \quad R=0$ $10 \div 2 = 5 \quad R=0$ $5 \div 2 = 2 \quad R=1$ $2 \div 2 = 1 \quad R=0$	$(125)_{10} = (1111101)_2$ $125 \div 2 = 62 \quad R=1$ $62 \div 2 = 31 \quad R=0$ $31 \div 2 = 15 \quad R=1$ $15 \div 2 = 7 \quad R=1$ $7 \div 2 = 3 \quad R=1$ $3 \div 2 = 1 \quad R=1$	$(397)_{10} = (110001101)_2$ $397 \div 2 = 198 \quad R=1$ $198 \div 2 = 99 \quad R=0$ $99 \div 2 = 49 \quad R=1$ $49 \div 2 = 24 \quad R=1$ $24 \div 2 = 12 \quad R=0$ $12 \div 2 = 6 \quad R=0$ $6 \div 2 = 3 \quad R=0$ $3 \div 2 = 1 \quad R=1$



$(21)_{10} = (10101)_2$ $21 \div 2 = 10 \quad R=1$ $10 \div 2 = 5 \quad R=0$ $5 \div 2 = 2 \quad R=1$ $2 \div 2 = 1 \quad R=0$	$(25)_{10} = (11001)_2$ $25 \div 2 = 12 \quad R=1$ $12 \div 2 = 6 \quad R=0$ $6 \div 2 = 3 \quad R=0$ $3 \div 2 = 1 \quad R=1$	$(429)_{10} = (11010101)_2$ $429 \div 2 = 214 \quad R=1$ $214 \div 2 = 107 \quad R=0$ $107 \div 2 = 53 \quad R=1$ $53 \div 2 = 26 \quad R=1$ $26 \div 2 = 13 \quad R=0$ $13 \div 2 = 6 \quad R=1$ $6 \div 2 = 3 \quad R=0$ $3 \div 2 = 1 \quad R=1$	$(265)_{10} = (10000100)_2$ $265 \div 2 = 132 \quad R=1$ $132 \div 2 = 66 \quad R=0$ $66 \div 2 = 33 \quad R=0$ $33 \div 2 = 16 \quad R=1$ $16 \div 2 = 8 \quad R=0$ $8 \div 2 = 4 \quad R=0$ $4 \div 2 = 2 \quad R=0$ $2 \div 2 = 1 \quad R=0$
$(9)_{10} = (1001)_2$ $9 \div 2 = 4 \quad R=1$ $4 \div 2 = 2 \quad R=0$ $2 \div 2 = 1 \quad R=0$	$(69)_{10} = (1010101)_2$ $69 \div 2 = 34 \quad R=1$ $34 \div 2 = 17 \quad R=0$ $17 \div 2 = 8 \quad R=1$ $8 \div 2 = 4 \quad R=0$	$(13)_{10} = (1101)_2$ $13 \div 2 = 6 \quad R=1$ $6 \div 2 = 3 \quad R=0$ $3 \div 2 = 1 \quad R=1$	$(265)_{10} = (10000100)_2$ $265 \div 2 = 132 \quad R=1$ $132 \div 2 = 66 \quad R=0$ $66 \div 2 = 33 \quad R=0$ $33 \div 2 = 16 \quad R=1$ $16 \div 2 = 8 \quad R=0$ $8 \div 2 = 4 \quad R=0$ $4 \div 2 = 2 \quad R=0$ $2 \div 2 = 1 \quad R=0$
$(117)_{10} = (1110101)_2$ $117 \div 2 = 58 \quad R=1$ $58 \div 2 = 29 \quad R=0$ $29 \div 2 = 14 \quad R=1$ $14 \div 2 = 7 \quad R=0$ $7 \div 2 = 3 \quad R=1$ $3 \div 2 = 1 \quad R=1$	$(129)_{10} = (10000001)_2$ $129 \div 2 = 64 \quad R=1$ $64 \div 2 = 32 \quad R=0$ $32 \div 2 = 16 \quad R=0$ $16 \div 2 = 8 \quad R=0$ $8 \div 2 = 4 \quad R=0$ $4 \div 2 = 2 \quad R=0$ $2 \div 2 = 1 \quad R=0$	$(261)_{10} = (100000101)_2$ $261 \div 2 = 130 \quad R=1$ $130 \div 2 = 65 \quad R=0$ $65 \div 2 = 32 \quad R=1$ $32 \div 2 = 16 \quad R=0$ $16 \div 2 = 8 \quad R=0$ $8 \div 2 = 4 \quad R=0$ $4 \div 2 = 2 \quad R=0$ $2 \div 2 = 1 \quad R=0$	$(389)_{10} = (11000000)_2$ $389 \div 2 = 194 \quad R=1$ $194 \div 2 = 97 \quad R=0$ $97 \div 2 = 48 \quad R=1$ $48 \div 2 = 24 \quad R=0$ $24 \div 2 = 12 \quad R=0$ $12 \div 2 = 6 \quad R=0$ $6 \div 2 = 3 \quad R=0$ $3 \div 2 = 1 \quad R=1$
$(189)_{10} = (1111101)_2$ $189 \div 2 = 94 \quad R=1$ $94 \div 2 = 47 \quad R=0$ $47 \div 2 = 23 \quad R=1$ $23 \div 2 = 11 \quad R=1$ $11 \div 2 = 5 \quad R=1$ $5 \div 2 = 2 \quad R=1$ $2 \div 2 = 1 \quad R=1$	$(277)_{10} = (100010101)_2$ $277 \div 2 = 138 \quad R=1$ $138 \div 2 = 69 \quad R=0$ $69 \div 2 = 34 \quad R=1$ $34 \div 2 = 17 \quad R=0$ $17 \div 2 = 8 \quad R=1$ $8 \div 2 = 4 \quad R=0$ $4 \div 2 = 2 \quad R=0$ $2 \div 2 = 1 \quad R=0$	$(57)_{10} = (100111)_2$ $57 \div 2 = 28 \quad R=1$ $28 \div 2 = 14 \quad R=0$ $14 \div 2 = 7 \quad R=1$ $7 \div 2 = 3 \quad R=1$ $3 \div 2 = 1 \quad R=1$	$(341)_{10} = (101010101)_2$ $341 \div 2 = 170 \quad R=1$ $170 \div 2 = 85 \quad R=0$ $85 \div 2 = 42 \quad R=1$ $42 \div 2 = 21 \quad R=0$ $21 \div 2 = 10 \quad R=1$ $10 \div 2 = 5 \quad R=0$ $5 \div 2 = 2 \quad R=1$ $2 \div 2 = 1 \quad R=0$
$(145)_{10} = (10010001)_2$ $145 \div 2 = 72 \quad R=1$ $72 \div 2 = 36 \quad R=0$ $36 \div 2 = 18 \quad R=0$ $18 \div 2 = 9 \quad R=0$ $9 \div 2 = 4 \quad R=1$ $4 \div 2 = 2 \quad R=0$ $2 \div 2 = 1 \quad R=0$	$(333)_{10} = (101001101)_2$ $333 \div 2 = 166 \quad R=1$ $166 \div 2 = 83 \quad R=0$ $83 \div 2 = 41 \quad R=1$ $41 \div 2 = 20 \quad R=1$ $20 \div 2 = 10 \quad R=0$ $10 \div 2 = 5 \quad R=0$ $5 \div 2 = 2 \quad R=1$ $2 \div 2 = 1 \quad R=0$	$(105)_{10} = (1101001)_2$ $105 \div 2 = 52 \quad R=1$ $52 \div 2 = 26 \quad R=0$ $26 \div 2 = 13 \quad R=0$ $13 \div 2 = 6 \quad R=1$ $6 \div 2 = 3 \quad R=0$ $3 \div 2 = 1 \quad R=1$	$(365)_{10} = (10110101)_2$ $365 \div 2 = 182 \quad R=1$ $182 \div 2 = 91 \quad R=0$ $91 \div 2 = 45 \quad R=1$ $45 \div 2 = 22 \quad R=1$ $22 \div 2 = 11 \quad R=0$ $11 \div 2 = 5 \quad R=1$ $5 \div 2 = 2 \quad R=1$ $2 \div 2 = 1 \quad R=0$
$(457)_{10} = (111001001)_2$ $457 \div 2 = 228 \quad R=1$ $228 \div 2 = 114 \quad R=0$ $114 \div 2 = 57 \quad R=0$ $57 \div 2 = 28 \quad R=1$ $28 \div 2 = 14 \quad R=0$ $14 \div 2 = 7 \quad R=0$ $7 \div 2 = 3 \quad R=1$ $3 \div 2 = 1 \quad R=1$	$(29)_{10} = (11101)_2$ $29 \div 2 = 14 \quad R=1$ $14 \div 2 = 7 \quad R=0$ $7 \div 2 = 3 \quad R=1$ $3 \div 2 = 1 \quad R=1$	$(429)_{10} = (11010101)_2$ $429 \div 2 = 214 \quad R=1$ $214 \div 2 = 107 \quad R=0$ $107 \div 2 = 53 \quad R=1$ $53 \div 2 = 26 \quad R=1$ $26 \div 2 = 13 \quad R=0$ $13 \div 2 = 6 \quad R=1$ $6 \div 2 = 3 \quad R=0$ $3 \div 2 = 1 \quad R=1$	$(213)_{10} = (11010101)_2$ $213 \div 2 = 106 \quad R=1$ $106 \div 2 = 53 \quad R=0$ $53 \div 2 = 26 \quad R=1$ $26 \div 2 = 13 \quad R=0$ $13 \div 2 = 6 \quad R=1$ $6 \div 2 = 3 \quad R=0$ $3 \div 2 = 1 \quad R=1$



$25)_{10} = (110101001)_2$ $25 \div 2 = 12 \quad R=1$ $12 \div 2 = 6 \quad R=0$ $6 \div 2 = 3 \quad R=0$ $3 \div 2 = 1 \quad R=1$ $1 \div 2 = 0 \quad R=1$	$293)_{10} = (10010010101)_2$ $293 \div 2 = 146 \quad R=1$ $146 \div 2 = 73 \quad R=0$ $73 \div 2 = 36 \quad R=1$ $36 \div 2 = 18 \quad R=0$ $18 \div 2 = 9 \quad R=0$ $9 \div 2 = 4 \quad R=1$ $4 \div 2 = 2 \quad R=0$ $2 \div 2 = 1 \quad R=0$	$181)_{10} = (1011010101)_2$ $181 \div 2 = 90 \quad R=1$ $90 \div 2 = 45 \quad R=0$ $45 \div 2 = 22 \quad R=1$ $22 \div 2 = 11 \quad R=0$ $11 \div 2 = 5 \quad R=1$ $5 \div 2 = 2 \quad R=1$ $2 \div 2 = 1 \quad R=0$	$113)_{10} = (1110001)_2$ $113 \div 2 = 56 \quad R=1$ $56 \div 2 = 28 \quad R=0$ $28 \div 2 = 14 \quad R=0$ $14 \div 2 = 7 \quad R=0$ $7 \div 2 = 3 \quad R=1$ $3 \div 2 = 1 \quad R=1$
$193)_{10} = (11000001)_2$ $193 \div 2 = 96 \quad R=1$ $96 \div 2 = 48 \quad R=0$ $48 \div 2 = 24 \quad R=0$ $24 \div 2 = 12 \quad R=0$ $12 \div 2 = 6 \quad R=0$ $6 \div 2 = 3 \quad R=0$ $3 \div 2 = 1 \quad R=1$	$469)_{10} = (111010101)_2$ $469 \div 2 = 234 \quad R=1$ $234 \div 2 = 117 \quad R=0$ $117 \div 2 = 58 \quad R=1$ $58 \div 2 = 29 \quad R=0$ $29 \div 2 = 14 \quad R=1$ $14 \div 2 = 7 \quad R=0$ $7 \div 2 = 3 \quad R=1$ $3 \div 2 = 1 \quad R=1$	$377)_{10} = (1001101)_2$ $377 \div 2 = 188 \quad R=1$ $188 \div 2 = 94 \quad R=0$ $94 \div 2 = 47 \quad R=1$ $47 \div 2 = 23 \quad R=1$ $23 \div 2 = 11 \quad R=1$ $11 \div 2 = 5 \quad R=1$ $5 \div 2 = 2 \quad R=1$ $2 \div 2 = 1 \quad R=0$	$689)_{10} = (1011001)_2$ $689 \div 2 = 344 \quad R=1$ $344 \div 2 = 172 \quad R=0$ $172 \div 2 = 86 \quad R=0$ $86 \div 2 = 43 \quad R=1$ $43 \div 2 = 21 \quad R=1$ $21 \div 2 = 10 \quad R=1$ $10 \div 2 = 5 \quad R=0$ $5 \div 2 = 2 \quad R=1$ $2 \div 2 = 1 \quad R=0$
$33)_{10} = (100001)_2$ $33 \div 2 = 16 \quad R=1$ $16 \div 2 = 8 \quad R=0$ $8 \div 2 = 4 \quad R=0$ $4 \div 2 = 2 \quad R=0$ $2 \div 2 = 1 \quad R=0$	$205)_{10} = (11110101)_2$ $205 \div 2 = 102 \quad R=1$ $102 \div 2 = 51 \quad R=0$ $51 \div 2 = 25 \quad R=1$ $25 \div 2 = 12 \quad R=1$ $12 \div 2 = 6 \quad R=0$ $6 \div 2 = 3 \quad R=1$ $3 \div 2 = 1 \quad R=1$	$381)_{10} = (10111101)_2$ $381 \div 2 = 190 \quad R=1$ $190 \div 2 = 95 \quad R=0$ $95 \div 2 = 47 \quad R=1$ $47 \div 2 = 23 \quad R=1$ $23 \div 2 = 11 \quad R=1$ $11 \div 2 = 5 \quad R=1$ $5 \div 2 = 2 \quad R=1$ $2 \div 2 = 1 \quad R=0$	$285)_{10} = (10001101)_2$ $285 \div 2 = 142 \quad R=1$ $142 \div 2 = 71 \quad R=0$ $71 \div 2 = 35 \quad R=1$ $35 \div 2 = 17 \quad R=1$ $17 \div 2 = 8 \quad R=1$ $8 \div 2 = 4 \quad R=0$ $4 \div 2 = 2 \quad R=0$ $2 \div 2 = 1 \quad R=0$
$237)_{10} = (11101101)_2$ $237 \div 2 = 118 \quad R=1$ $118 \div 2 = 59 \quad R=0$ $59 \div 2 = 29 \quad R=1$ $29 \div 2 = 14 \quad R=1$ $14 \div 2 = 7 \quad R=0$ $7 \div 2 = 3 \quad R=1$ $3 \div 2 = 1 \quad R=1$	$413)_{10} = (11001111)_2$ $413 \div 2 = 206 \quad R=1$ $206 \div 2 = 103 \quad R=1$ $103 \div 2 = 51 \quad R=1$ $51 \div 2 = 25 \quad R=1$ $25 \div 2 = 12 \quad R=1$ $12 \div 2 = 6 \quad R=0$ $6 \div 2 = 3 \quad R=0$ $3 \div 2 = 1 \quad R=1$	$393)_{10} = (11001001)_2$ $393 \div 2 = 196 \quad R=1$ $196 \div 2 = 98 \quad R=0$ $98 \div 2 = 49 \quad R=1$ $49 \div 2 = 24 \quad R=1$ $24 \div 2 = 12 \quad R=0$ $12 \div 2 = 6 \quad R=0$ $6 \div 2 = 3 \quad R=0$ $3 \div 2 = 1 \quad R=1$	$527)_{10} = (111001)_2$ $527 \div 2 = 263 \quad R=1$ $263 \div 2 = 131 \quad R=1$ $131 \div 2 = 65 \quad R=1$ $65 \div 2 = 32 \quad R=1$ $32 \div 2 = 16 \quad R=0$ $16 \div 2 = 8 \quad R=0$ $8 \div 2 = 4 \quad R=0$ $4 \div 2 = 2 \quad R=0$ $2 \div 2 = 1 \quad R=0$
$101)_{10} = (1100101)_2$ $101 \div 2 = 50 \quad R=1$ $50 \div 2 = 25 \quad R=0$ $25 \div 2 = 12 \quad R=1$ $12 \div 2 = 6 \quad R=0$ $6 \div 2 = 3 \quad R=0$ $3 \div 2 = 1 \quad R=1$	$225)_{10} = (10001001)_2$ $225 \div 2 = 112 \quad R=1$ $112 \div 2 = 56 \quad R=0$ $56 \div 2 = 28 \quad R=0$ $28 \div 2 = 14 \quad R=0$ $14 \div 2 = 7 \quad R=0$ $7 \div 2 = 3 \quad R=1$ $3 \div 2 = 1 \quad R=1$	$345)_{10} = (101011001)_2$ $345 \div 2 = 172 \quad R=1$ $172 \div 2 = 86 \quad R=0$ $86 \div 2 = 43 \quad R=0$ $43 \div 2 = 21 \quad R=1$ $21 \div 2 = 10 \quad R=1$ $10 \div 2 = 5 \quad R=0$ $5 \div 2 = 2 \quad R=1$ $2 \div 2 = 1 \quad R=0$	$317)_{10} = (100111101)_2$ $317 \div 2 = 158 \quad R=1$ $158 \div 2 = 79 \quad R=0$ $79 \div 2 = 39 \quad R=1$ $39 \div 2 = 19 \quad R=1$ $19 \div 2 = 9 \quad R=1$ $9 \div 2 = 4 \quad R=1$ $4 \div 2 = 2 \quad R=0$ $2 \div 2 = 1 \quad R=0$



$$C249)_{10} = (11111001)_2$$

$$\begin{aligned} 249 \div 2 &= 124 & R=1 \\ 124 \div 2 &= 62 & R=0 \\ 62 \div 2 &= 31 & R=0 \\ 31 \div 2 &= 15 & R=1 \\ 15 \div 2 &= 7 & R=1 \\ 7 \div 2 &= 3 & R=1 \\ 3 \div 2 &= 1 & R=1 \end{aligned}$$

$$C241)_{10} = (11110001)_2$$

$$\begin{aligned} 241 \div 2 &= 120 & R=1 \\ 120 \div 2 &= 60 & R=0 \\ 60 \div 2 &= 30 & R=0 \\ 30 \div 2 &= 15 & R=0 \\ 15 \div 2 &= 7 & R=1 \\ 7 \div 2 &= 3 & R=1 \\ 3 \div 2 &= 1 & R=1 \end{aligned}$$

$$C161)_{10} = (10100001)_2$$

$$\begin{aligned} 161 \div 2 &= 80 & R=1 \\ 80 \div 2 &= 40 & R=0 \\ 40 \div 2 &= 20 & R=0 \\ 20 \div 2 &= 10 & R=0 \\ 10 \div 2 &= 5 & R=0 \\ 5 \div 2 &= 2 & R=1 \\ 2 \div 2 &= 1 & R=0 \end{aligned}$$

$$C449)_{10} = (11000001)_2$$

$$\begin{aligned} 449 \div 2 &= 224 & R=1 \\ 224 \div 2 &= 112 & R=0 \\ 112 \div 2 &= 56 & R=0 \\ 56 \div 2 &= 28 & R=0 \\ 28 \div 2 &= 14 & R=0 \\ 14 \div 2 &= 7 & R=0 \\ 7 \div 2 &= 3 & R=1 \\ 3 \div 2 &= 1 & R=1 \end{aligned}$$

$$C209)_{10} = (11100101)_2$$

$$\begin{aligned} 209 \div 2 &= 104 & R=1 \\ 104 \div 2 &= 52 & R=0 \\ 52 \div 2 &= 26 & R=0 \\ 26 \div 2 &= 13 & R=0 \\ 13 \div 2 &= 6 & R=1 \\ 6 \div 2 &= 3 & R=0 \\ 3 \div 2 &= 1 & R=1 \end{aligned}$$

$$C245)_{10} = (11111001)_2$$

$$\begin{aligned} 245 \div 2 &= 122 & R=1 \\ 122 \div 2 &= 61 & R=0 \\ 61 \div 2 &= 30 & R=1 \\ 30 \div 2 &= 15 & R=0 \\ 15 \div 2 &= 7 & R=1 \\ 7 \div 2 &= 3 & R=1 \\ 3 \div 2 &= 1 & R=1 \end{aligned}$$

$$C377)_{10} = (10111001)_2$$

$$\begin{aligned} 377 \div 2 &= 188 & R=1 \\ 188 \div 2 &= 94 & R=0 \\ 94 \div 2 &= 47 & R=0 \\ 47 \div 2 &= 23 & R=1 \\ 23 \div 2 &= 11 & R=1 \\ 11 \div 2 &= 5 & R=1 \\ 5 \div 2 &= 2 & R=1 \\ 2 \div 2 &= 1 & R=0 \end{aligned}$$

$$C337)_{10} = (101010001)_2$$

$$\begin{aligned} 337 \div 2 &= 168 & R=1 \\ 168 \div 2 &= 84 & R=0 \\ 84 \div 2 &= 42 & R=0 \\ 42 \div 2 &= 21 & R=0 \\ 21 \div 2 &= 10 & R=1 \\ 10 \div 2 &= 5 & R=0 \\ 5 \div 2 &= 2 & R=1 \\ 2 \div 2 &= 1 & R=0 \end{aligned}$$

$$C229)_{10} = (11100101)_2$$

$$\begin{aligned} 229 \div 2 &= 114 & R=1 \\ 114 \div 2 &= 57 & R=0 \\ 57 \div 2 &= 28 & R=1 \\ 28 \div 2 &= 14 & R=0 \\ 14 \div 2 &= 7 & R=0 \\ 7 \div 2 &= 3 & R=1 \\ 3 \div 2 &= 1 & R=1 \end{aligned}$$

$$C253)_{10} = (11111101)_2$$

$$\begin{aligned} 253 \div 2 &= 126 & R=1 \\ 126 \div 2 &= 63 & R=0 \\ 63 \div 2 &= 31 & R=1 \\ 31 \div 2 &= 15 & R=1 \\ 15 \div 2 &= 7 & R=1 \\ 7 \div 2 &= 3 & R=1 \\ 3 \div 2 &= 1 & R=1 \end{aligned}$$

$$C221)_{10} = (11011101)_2$$

$$\begin{aligned} 221 \div 2 &= 110 & R=1 \\ 110 \div 2 &= 55 & R=0 \\ 55 \div 2 &= 27 & R=1 \\ 27 \div 2 &= 13 & R=1 \\ 13 \div 2 &= 6 & R=1 \\ 6 \div 2 &= 3 & R=0 \\ 3 \div 2 &= 1 & R=1 \end{aligned}$$

$$C201)_{10} = (11001001)_2$$

$$\begin{aligned} 209 \div 2 &= 100 & R=1 \\ 100 \div 2 &= 50 & R=0 \\ 50 \div 2 &= 25 & R=0 \\ 25 \div 2 &= 12 & R=1 \\ 12 \div 2 &= 6 & R=0 \\ 6 \div 2 &= 3 & R=0 \\ 3 \div 2 &= 1 & R=1 \end{aligned}$$

$$C477)_{10} = (111011101)_2$$

$$\begin{aligned} 477 \div 2 &= 238 & R=1 \\ 238 \div 2 &= 119 & R=0 \\ 119 \div 2 &= 59 & R=1 \\ 59 \div 2 &= 29 & R=1 \\ 29 \div 2 &= 14 & R=1 \\ 14 \div 2 &= 7 & R=0 \\ 7 \div 2 &= 3 & R=1 \\ 3 \div 2 &= 1 & R=1 \end{aligned}$$

$$C121)_{10} = (1111001)_2$$

$$\begin{aligned} 121 \div 2 &= 60 & R=1 \\ 60 \div 2 &= 30 & R=0 \\ 30 \div 2 &= 15 & R=0 \\ 15 \div 2 &= 7 & R=1 \\ 7 \div 2 &= 3 & R=1 \\ 3 \div 2 &= 1 & R=1 \end{aligned}$$

$$C421)_{10} = (110100101)_2$$

$$\begin{aligned} 421 \div 2 &= 210 & R=1 \\ 210 \div 2 &= 105 & R=0 \\ 105 \div 2 &= 52 & R=1 \\ 52 \div 2 &= 26 & R=0 \\ 26 \div 2 &= 13 & R=0 \\ 13 \div 2 &= 6 & R=1 \\ 6 \div 2 &= 3 & R=0 \\ 3 \div 2 &= 1 & R=1 \end{aligned}$$

$$C325)_{10} = (101000101)_2$$

$$\begin{aligned} 325 \div 2 &= 162 & R=1 \\ 162 \div 2 &= 81 & R=0 \\ 81 \div 2 &= 40 & R=1 \\ 40 \div 2 &= 20 & R=0 \\ 20 \div 2 &= 10 & R=0 \\ 10 \div 2 &= 5 & R=0 \\ 5 \div 2 &= 2 & R=1 \\ 2 \div 2 &= 1 & R=0 \end{aligned}$$

$$C81)_{10} = (1010001)_2$$

$$\begin{aligned} 81 \div 2 &= 40 & R=1 \\ 40 \div 2 &= 20 & R=0 \\ 20 \div 2 &= 10 & R=0 \\ 10 \div 2 &= 5 & R=0 \\ 5 \div 2 &= 2 & R=1 \\ 2 \div 2 &= 1 & R=0 \end{aligned}$$

$$C301)_{10} = (100111101)_2$$

$$\begin{aligned} 301 \div 2 &= 150 & R=1 \\ 150 \div 2 &= 75 & R=0 \\ 75 \div 2 &= 37 & R=1 \\ 37 \div 2 &= 18 & R=1 \\ 18 \div 2 &= 9 & R=0 \\ 9 \div 2 &= 4 & R=1 \\ 4 \div 2 &= 2 & R=0 \\ 2 \div 2 &= 1 & R=0 \end{aligned}$$

$$C385)_{10} = (110001011)_2$$

$$\begin{aligned} 385 \div 2 &= 192 & R=1 \\ 192 \div 2 &= 96 & R=0 \\ 96 \div 2 &= 48 & R=0 \\ 48 \div 2 &= 24 & R=0 \\ 24 \div 2 &= 12 & R=0 \\ 12 \div 2 &= 6 & R=0 \\ 6 \div 2 &= 3 & R=0 \\ 3 \div 2 &= 1 & R=1 \end{aligned}$$

$$C465)_{10} = (111010001)_2$$

$$\begin{aligned} 465 \div 2 &= 232 & R=1 \\ 232 \div 2 &= 116 & R=0 \\ 116 \div 2 &= 58 & R=0 \\ 58 \div 2 &= 29 & R=0 \\ 29 \div 2 &= 14 & R=1 \\ 14 \div 2 &= 7 & R=0 \\ 7 \div 2 &= 3 & R=1 \\ 3 \div 2 &= 1 & R=1 \end{aligned}$$



$$(453)_{10} = (111000101)_2$$

$$\begin{aligned} 453 \div 2 &= 226 \quad R=1 \\ 226 \div 2 &= 113 \quad R=0 \\ 113 \div 2 &= 56 \quad R=1 \\ 56 \div 2 &= 28 \quad R=0 \\ 28 \div 2 &= 14 \quad R=0 \\ 14 \div 2 &= 7 \quad R=0 \\ 7 \div 2 &= 3 \quad R=1 \\ 3 \div 2 &= 1 \quad R=1 \end{aligned}$$

$$(217)_{10} = (11011001)_2$$

$$\begin{aligned} 217 \div 2 &= 108 \quad R=1 \\ 108 \div 2 &= 54 \quad R=0 \\ 54 \div 2 &= 27 \quad R=0 \\ 27 \div 2 &= 13 \quad R=1 \\ 13 \div 2 &= 6 \quad R=1 \\ 6 \div 2 &= 3 \quad R=0 \\ 3 \div 2 &= 1 \quad R=1 \end{aligned}$$

$$(273)_{10} = (100010001)_2$$

$$\begin{aligned} 273 \div 2 &= 136 \quad R=1 \\ 136 \div 2 &= 68 \quad R=0 \\ 68 \div 2 &= 34 \quad R=0 \\ 34 \div 2 &= 17 \quad R=0 \\ 17 \div 2 &= 8 \quad R=1 \\ 8 \div 2 &= 4 \quad R=0 \\ 4 \div 2 &= 2 \quad R=0 \\ 2 \div 2 &= 1 \quad R=0 \end{aligned}$$

$$(405)_{10} = (110010101)_2$$

$$\begin{aligned} 405 \div 2 &= 202 \quad R=1 \\ 202 \div 2 &= 101 \quad R=0 \\ 101 \div 2 &= 50 \quad R=1 \\ 50 \div 2 &= 25 \quad R=0 \\ 25 \div 2 &= 12 \quad R=1 \\ 12 \div 2 &= 6 \quad R=0 \\ 6 \div 2 &= 3 \quad R=0 \\ 3 \div 2 &= 1 \quad R=1 \end{aligned}$$

$$(433)_{10} = (110110001)_2$$

$$\begin{aligned} 433 \div 2 &= 216 \quad R=1 \\ 216 \div 2 &= 108 \quad R=0 \\ 108 \div 2 &= 54 \quad R=0 \\ 54 \div 2 &= 27 \quad R=0 \\ 27 \div 2 &= 13 \quad R=1 \\ 13 \div 2 &= 6 \quad R=1 \\ 6 \div 2 &= 3 \quad R=0 \\ 3 \div 2 &= 1 \quad R=1 \end{aligned}$$

$$(473)_{10} = (111011001)_2$$

$$\begin{aligned} 473 \div 2 &= 236 \quad R=1 \\ 236 \div 2 &= 118 \quad R=0 \\ 118 \div 2 &= 59 \quad R=0 \\ 59 \div 2 &= 29 \quad R=1 \\ 29 \div 2 &= 14 \quad R=1 \\ 14 \div 2 &= 7 \quad R=0 \\ 7 \div 2 &= 3 \quad R=1 \\ 3 \div 2 &= 1 \quad R=1 \end{aligned}$$

$$(437)_{10} = (11101101)_2$$

$$\begin{aligned} 437 \div 2 &= 218 \quad R=1 \\ 218 \div 2 &= 109 \quad R=0 \\ 109 \div 2 &= 54 \quad R=1 \\ 54 \div 2 &= 27 \quad R=0 \\ 27 \div 2 &= 13 \quad R=1 \\ 13 \div 2 &= 6 \quad R=1 \\ 6 \div 2 &= 3 \quad R=0 \\ 3 \div 2 &= 1 \quad R=1 \end{aligned}$$

$$(493)_{10} = (111101101)_2$$

$$\begin{aligned} 493 \div 2 &= 246 \quad R=1 \\ 246 \div 2 &= 123 \quad R=0 \\ 123 \div 2 &= 61 \quad R=1 \\ 61 \div 2 &= 30 \quad R=1 \\ 30 \div 2 &= 15 \quad R=0 \\ 15 \div 2 &= 7 \quad R=1 \\ 7 \div 2 &= 3 \quad R=1 \\ 3 \div 2 &= 1 \quad R=1 \end{aligned}$$

$$(93)_{10} = (1011101)_2$$

$$\begin{aligned} 93 \div 2 &= 46 \quad R=1 \\ 46 \div 2 &= 23 \quad R=0 \\ 23 \div 2 &= 11 \quad R=1 \\ 11 \div 2 &= 5 \quad R=1 \\ 5 \div 2 &= 2 \quad R=1 \\ 2 \div 2 &= 1 \quad R=0 \end{aligned}$$

$$(45)_{10} = (101101)_2$$

$$\begin{aligned} 45 \div 2 &= 22 \quad R=1 \\ 22 \div 2 &= 11 \quad R=0 \\ 11 \div 2 &= 5 \quad R=1 \\ 5 \div 2 &= 2 \quad R=1 \\ 2 \div 2 &= 1 \quad R=0 \end{aligned}$$

$$(197)_{10} = (1100101)_2$$

$$\begin{aligned} 197 \div 2 &= 98 \quad R=1 \\ 98 \div 2 &= 49 \quad R=0 \\ 49 \div 2 &= 24 \quad R=1 \\ 24 \div 2 &= 12 \quad R=0 \\ 12 \div 2 &= 6 \quad R=0 \\ 6 \div 2 &= 3 \quad R=0 \\ 3 \div 2 &= 1 \quad R=1 \end{aligned}$$

$$(309)_{10} = (100110101)_2$$

$$\begin{aligned} 309 \div 2 &= 154 \quad R=1 \\ 154 \div 2 &= 77 \quad R=0 \\ 77 \div 2 &= 38 \quad R=1 \\ 38 \div 2 &= 19 \quad R=0 \\ 19 \div 2 &= 9 \quad R=1 \\ 9 \div 2 &= 4 \quad R=1 \\ 4 \div 2 &= 2 \quad R=0 \\ 2 \div 2 &= 1 \quad R=0 \end{aligned}$$



V. Conclusiones: La conversión de decimal a binario nos ayuda a comprender un poco mejor el lenguaje maquina