

Universidad Galileo
Instituto Von Neumann
Técnico en Desarrollo de Software
Sección A



Ejercicio 1

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Ejercicio 1

1. "Empezamos el técnico en la Universidad Galileo."

TAREA:

Ejercicio 1.

"Empezamos el técnico en la Universidad Galileo."

$E = 69$ $2 \overline{)69}$ $2 \overline{)34}$ $2 \overline{)17}$ $2 \overline{)8}$ $2 \overline{)4}$ $2 \overline{)1}$
 01000101_2 $\frac{3}{0}$ $\frac{17}{14}$ $\frac{8}{7}$ $\frac{4}{0}$ $\frac{1}{0}$ $\frac{1}{0}$

$m = 109$ $2 \overline{)109}$ $2 \overline{)54}$ $2 \overline{)27}$ $2 \overline{)13}$ $2 \overline{)6}$ $2 \overline{)3}$
 01101101_2 $\frac{5}{8}$ $\frac{27}{14}$ $\frac{27}{14}$ $\frac{13}{0}$ $\frac{6}{0}$ $\frac{3}{1}$

$p = 112$ $2 \overline{)112}$ $2 \overline{)56}$ $2 \overline{)28}$ $2 \overline{)14}$ $2 \overline{)7}$ $2 \overline{)3}$
 01110000_2 $\frac{56}{12}$ $\frac{28}{16}$ $\frac{28}{16}$ $\frac{14}{0}$ $\frac{7}{1}$ $\frac{3}{1}$

$e = 101$ $2 \overline{)101}$ $2 \overline{)50}$ $2 \overline{)25}$ $2 \overline{)12}$ $2 \overline{)6}$ $2 \overline{)3}$
 01100101_2 $\frac{50}{10}$ $\frac{25}{10}$ $\frac{25}{10}$ $\frac{12}{0}$ $\frac{6}{0}$ $\frac{3}{1}$

$z = 122$ $2 \overline{)122}$ $2 \overline{)61}$ $2 \overline{)30}$ $2 \overline{)15}$ $2 \overline{)7}$ $2 \overline{)3}$
 01111010_2 $\frac{61}{02}$ $\frac{30}{01}$ $\frac{30}{10}$ $\frac{15}{10}$ $\frac{7}{1}$ $\frac{3}{1}$

$a = 97$ $2 \overline{)97}$ $2 \overline{)48}$ $2 \overline{)24}$ $2 \overline{)12}$ $2 \overline{)6}$ $2 \overline{)3}$
 01100001_2 $\frac{48}{17}$ $\frac{24}{08}$ $\frac{24}{04}$ $\frac{12}{04}$ $\frac{6}{0}$ $\frac{3}{1}$

$m = 109$ $2 \overline{)109}$ $2 \overline{)54}$ $2 \overline{)27}$ $2 \overline{)13}$ $2 \overline{)6}$ $2 \overline{)3}$
 01101101_2 $\frac{54}{09}$ $\frac{27}{14}$ $\frac{27}{14}$ $\frac{13}{0}$ $\frac{6}{0}$ $\frac{3}{1}$

$o = 111$ $2 \overline{)111}$ $2 \overline{)55}$ $2 \overline{)27}$ $2 \overline{)13}$ $2 \overline{)6}$ $2 \overline{)3}$
 01101111_2 $\frac{55}{11}$ $\frac{27}{14}$ $\frac{27}{14}$ $\frac{13}{0}$ $\frac{6}{0}$ $\frac{3}{1}$

$s = 115$	$2 \overline{)115} \quad 2 \overline{)57} \quad 2 \overline{)28} \quad 2 \overline{)14} \quad 2 \overline{)7} \quad 2 \overline{)3}$
00111001_2	$\begin{array}{r} 57 \\ 2 \overline{)115} \\ -10 \\ \hline 15 \\ -14 \\ \hline 1 \end{array} \quad \begin{array}{r} 28 \\ 2 \overline{)57} \\ -4 \\ \hline 17 \\ -14 \\ \hline 3 \\ -2 \\ \hline 1 \end{array} \quad \begin{array}{r} 14 \\ 2 \overline{)28} \\ -2 \\ \hline 0 \end{array} \quad \begin{array}{r} 7 \\ 2 \overline{)14} \\ -14 \\ \hline 0 \end{array} \quad \begin{array}{r} 3 \\ 2 \overline{)7} \\ -6 \\ \hline 1 \end{array} \quad \begin{array}{r} 1 \\ 2 \overline{)3} \\ -2 \\ \hline 1 \end{array}$
$= 32 \cdot 00100000$	$\begin{array}{r} 14 \\ 2 \overline{)16} \\ -16 \\ \hline 0 \end{array} \quad \begin{array}{r} 8 \\ 2 \overline{)8} \\ -8 \\ \hline 0 \end{array} \quad \begin{array}{r} 4 \\ 2 \overline{)4} \\ -4 \\ \hline 0 \end{array} \quad \begin{array}{r} 2 \\ 2 \overline{)2} \\ -2 \\ \hline 0 \end{array} \quad \begin{array}{r} 1 \\ 2 \overline{)1} \\ -1 \\ \hline 0 \end{array}$
$e = 101$	$2 \overline{)50} \quad 2 \overline{)25} \quad 2 \overline{)12} \quad 2 \overline{)6} \quad 2 \overline{)3} \quad 2 \overline{)2}$
01100101	$\begin{array}{r} 50 \\ 2 \overline{)101} \\ -10 \\ \hline 1 \\ -1 \\ \hline 0 \end{array} \quad \begin{array}{r} 25 \\ 2 \overline{)50} \\ -4 \\ \hline 10 \\ -10 \\ \hline 0 \end{array} \quad \begin{array}{r} 12 \\ 2 \overline{)25} \\ -2 \\ \hline 5 \\ -5 \\ \hline 0 \end{array} \quad \begin{array}{r} 6 \\ 2 \overline{)12} \\ -12 \\ \hline 0 \end{array} \quad \begin{array}{r} 3 \\ 2 \overline{)6} \\ -6 \\ \hline 0 \end{array} \quad \begin{array}{r} 2 \\ 2 \overline{)3} \\ -2 \\ \hline 1 \end{array}$
$l = 108$	$2 \overline{)54} \quad 2 \overline{)27} \quad 2 \overline{)13} \quad 2 \overline{)6} \quad 2 \overline{)3} \quad 2 \overline{)2}$
$= 32 \cdot 00101100$	$\begin{array}{r} 54 \\ 2 \overline{)108} \\ -10 \\ \hline 8 \\ -8 \\ \hline 0 \end{array} \quad \begin{array}{r} 27 \\ 2 \overline{)54} \\ -4 \\ \hline 13 \\ -12 \\ \hline 1 \end{array} \quad \begin{array}{r} 13 \\ 2 \overline{)27} \\ -2 \\ \hline 7 \\ -7 \\ \hline 1 \end{array} \quad \begin{array}{r} 6 \\ 2 \overline{)13} \\ -12 \\ \hline 1 \\ -1 \\ \hline 0 \end{array} \quad \begin{array}{r} 3 \\ 2 \overline{)6} \\ -6 \\ \hline 0 \end{array} \quad \begin{array}{r} 2 \\ 2 \overline{)3} \\ -2 \\ \hline 1 \end{array}$
$= 32 \cdot 00100000$	$\begin{array}{r} 16 \\ 2 \overline{)32} \\ -16 \\ \hline 16 \\ -16 \\ \hline 0 \end{array} \quad \begin{array}{r} 8 \\ 2 \overline{)16} \\ -8 \\ \hline 8 \\ -8 \\ \hline 0 \end{array} \quad \begin{array}{r} 4 \\ 2 \overline{)8} \\ -4 \\ \hline 4 \\ -4 \\ \hline 0 \end{array} \quad \begin{array}{r} 2 \\ 2 \overline{)4} \\ -2 \\ \hline 2 \\ -2 \\ \hline 0 \end{array} \quad \begin{array}{r} 1 \\ 2 \overline{)2} \\ -2 \\ \hline 0 \end{array}$
$t = 116$	$2 \overline{)58} \quad 2 \overline{)29} \quad 2 \overline{)14} \quad 2 \overline{)7} \quad 2 \overline{)3} \quad 2 \overline{)1}$
01100100	$\begin{array}{r} 58 \\ 2 \overline{)116} \\ -10 \\ \hline 16 \\ -16 \\ \hline 0 \end{array} \quad \begin{array}{r} 29 \\ 2 \overline{)58} \\ -4 \\ \hline 18 \\ -16 \\ \hline 2 \\ -2 \\ \hline 0 \end{array} \quad \begin{array}{r} 14 \\ 2 \overline{)29} \\ -14 \\ \hline 15 \\ -14 \\ \hline 1 \\ -1 \\ \hline 0 \end{array} \quad \begin{array}{r} 7 \\ 2 \overline{)14} \\ -14 \\ \hline 0 \end{array} \quad \begin{array}{r} 3 \\ 2 \overline{)7} \\ -6 \\ \hline 1 \end{array} \quad \begin{array}{r} 1 \\ 2 \overline{)1} \\ -1 \\ \hline 0 \end{array}$
$e = 130$	$2 \overline{)65} \quad 2 \overline{)32} \quad 2 \overline{)16} \quad 2 \overline{)8} \quad 2 \overline{)4} \quad 2 \overline{)2}$
10000010	$\begin{array}{r} 65 \\ 2 \overline{)130} \\ -12 \\ \hline 10 \\ -10 \\ \hline 0 \end{array} \quad \begin{array}{r} 32 \\ 2 \overline{)65} \\ -6 \\ \hline 12 \\ -12 \\ \hline 0 \end{array} \quad \begin{array}{r} 16 \\ 2 \overline{)32} \\ -16 \\ \hline 16 \\ -16 \\ \hline 0 \end{array} \quad \begin{array}{r} 8 \\ 2 \overline{)16} \\ -16 \\ \hline 0 \end{array} \quad \begin{array}{r} 4 \\ 2 \overline{)8} \\ -4 \\ \hline 4 \\ -4 \\ \hline 0 \end{array} \quad \begin{array}{r} 2 \\ 2 \overline{)4} \\ -2 \\ \hline 2 \\ -2 \\ \hline 0 \end{array}$
$c = 99$	$2 \overline{)49} \quad 2 \overline{)24} \quad 2 \overline{)12} \quad 2 \overline{)6} \quad 2 \overline{)3} \quad 2 \overline{)1}$
01100011	$\begin{array}{r} 49 \\ 2 \overline{)99} \\ -4 \\ \hline 59 \\ -49 \\ \hline 10 \\ -8 \\ \hline 2 \\ -2 \\ \hline 0 \end{array} \quad \begin{array}{r} 24 \\ 2 \overline{)49} \\ -24 \\ \hline 25 \\ -24 \\ \hline 1 \\ -1 \\ \hline 0 \end{array} \quad \begin{array}{r} 12 \\ 2 \overline{)24} \\ -12 \\ \hline 12 \\ -12 \\ \hline 0 \end{array} \quad \begin{array}{r} 6 \\ 2 \overline{)12} \\ -6 \\ \hline 6 \\ -6 \\ \hline 0 \end{array} \quad \begin{array}{r} 3 \\ 2 \overline{)6} \\ -3 \\ \hline 3 \\ -3 \\ \hline 0 \end{array} \quad \begin{array}{r} 1 \\ 2 \overline{)1} \\ -1 \\ \hline 0 \end{array}$
$n = 110$	$2 \overline{)55} \quad 2 \overline{)27} \quad 2 \overline{)13} \quad 2 \overline{)6} \quad 2 \overline{)3} \quad 2 \overline{)2}$
01101110	$\begin{array}{r} 55 \\ 2 \overline{)110} \\ -10 \\ \hline 10 \\ -10 \\ \hline 0 \end{array} \quad \begin{array}{r} 27 \\ 2 \overline{)55} \\ -27 \\ \hline 28 \\ -27 \\ \hline 1 \\ -1 \\ \hline 0 \end{array} \quad \begin{array}{r} 13 \\ 2 \overline{)27} \\ -13 \\ \hline 14 \\ -13 \\ \hline 1 \\ -1 \\ \hline 0 \end{array} \quad \begin{array}{r} 6 \\ 2 \overline{)13} \\ -6 \\ \hline 7 \\ -6 \\ \hline 1 \\ -1 \\ \hline 0 \end{array} \quad \begin{array}{r} 3 \\ 2 \overline{)6} \\ -3 \\ \hline 3 \\ -3 \\ \hline 0 \end{array} \quad \begin{array}{r} 2 \\ 2 \overline{)2} \\ -2 \\ \hline 2 \\ -2 \\ \hline 0 \end{array}$
$i = 105$	$2 \overline{)52} \quad 2 \overline{)26} \quad 2 \overline{)13} \quad 2 \overline{)6} \quad 2 \overline{)3} \quad 2 \overline{)1}$
01101001	$\begin{array}{r} 52 \\ 2 \overline{)105} \\ -10 \\ \hline 5 \\ -4 \\ \hline 1 \\ -1 \\ \hline 0 \end{array} \quad \begin{array}{r} 26 \\ 2 \overline{)52} \\ -26 \\ \hline 26 \\ -26 \\ \hline 0 \end{array} \quad \begin{array}{r} 13 \\ 2 \overline{)26} \\ -13 \\ \hline 13 \\ -13 \\ \hline 0 \end{array} \quad \begin{array}{r} 6 \\ 2 \overline{)13} \\ -6 \\ \hline 7 \\ -6 \\ \hline 1 \\ -1 \\ \hline 0 \end{array} \quad \begin{array}{r} 3 \\ 2 \overline{)6} \\ -3 \\ \hline 3 \\ -3 \\ \hline 0 \end{array} \quad \begin{array}{r} 1 \\ 2 \overline{)1} \\ -1 \\ \hline 0 \end{array}$

$$\begin{array}{r}
 \begin{array}{c}
 \frac{99}{C} \\
 \cancel{9} \cancel{9} \\
 2 \overline{)99} \\
 2 \overline{)49} \\
 2 \overline{)24} \\
 2 \overline{)12} \\
 2 \overline{)6} \\
 2 \overline{)3} \\
 2 \overline{)1}
 \end{array}
 \end{array}$$

$$\begin{array}{r}
 0 = 111 \quad 2 \overline{)111} \quad 2 \overline{)55} \quad 2 \overline{)27} \quad 2 \overline{)13} \quad 2 \overline{)6} \quad 2 \overline{)3} \\
 \underline{-10} \qquad \underline{-4} \qquad \underline{-6} \qquad \underline{-12} \qquad \underline{-6} \qquad \underline{0} \qquad \underline{1} \\
 \hline
 11 \qquad 15 \qquad 6 \qquad 1
 \end{array}$$

$$\begin{array}{r}
 & 1 & 1 & 4 & 2 & 1 \\
 & \overline{)2} & 2\overline{)1} & 2\overline{)8} & 2\overline{)4} & 2\overline{)2} \\
 32 & 2\overline{)3} & 2\overline{)7} & 2\overline{)8} & 2\overline{)4} & 2\overline{)2} \\
 & -16 & -16 & -8 & -4 & -2 \\
 & \hline
 & 16 & 16 & 4 & 2 \\
 & -16 & -16 & -4 & -2 \\
 & \hline
 & 0 & 0 & 0 & 0
 \end{array}$$

$$\begin{array}{r}
 \begin{array}{ccccccccc}
 & 50 & 27 & 13 & 6 & 3 & 1 \\
 e = 101 & 2\overline{)101} & 2\overline{)50} & 2\overline{)27} & 2\overline{)13} & 2\overline{)6} & 2\overline{)3} \\
 & \underline{10} & \underline{4} & \underline{2} & \underline{12} & \underline{6} & \underline{2} \\
 & 0 & 18 & 07 & 1 & 0 & 1 \\
 & & \underline{18} & \underline{6} & & & \\
 & & 0 & 7 & & & \\
 \hline
 & 01100101 & & & & & & &
 \end{array}
 \end{array}$$

$$\begin{array}{ccccccccc}
 n = 110 & 2 \overline{) 110} & 2 \overline{) 55} & 2 \overline{) 27} & 2 \overline{) 13} & 2 \overline{) 6} & 2 \overline{) 3} & 2 \overline{) 1} \\
 & \underline{-10} & \underline{-55} & \underline{-27} & \underline{-12} & \underline{-6} & \underline{-3} & \underline{-1} \\
 & 0 & 0 & 0 & 1 & 0 & 0 & 1
 \end{array}$$

$$\begin{array}{ccccccccc}
 & 16 & 8 & 4 & 2 & 1 \\
 = 32 & 2\sqrt{32} & 2\sqrt{16} & 2\sqrt{8} & 2\sqrt{4} & 2\sqrt{2} \\
 & \underline{32} & \underline{16} & \underline{8} & \underline{4} & \underline{2} \\
 & 0 & 0 & 0 & 0 & 0
 \end{array}$$

$$1 = \frac{54}{2} \frac{27}{2} \frac{13}{2} \frac{6}{2} \frac{3}{2} \frac{1}{2}$$

$$\begin{array}{ccccccccc}
 & & & & & & & & \\
 \text{= } 32 & U = 85 & 2\overline{)85} & 2\overline{)42} & 2\overline{)21} & 2\overline{)10} & 2\overline{)5} & 2\overline{)2} & 2\overline{)1} \\
 & & \frac{4}{4} & \frac{4}{4} & \frac{2}{2} & \frac{10}{10} & \frac{5}{5} & \frac{2}{2} & \frac{1}{1} \\
 & & \frac{3}{0} & \frac{2}{0} & \frac{1}{1} & 0 & 0 & 0 & 0 \\
 00100000 & 01010101 & - & - & - & - & - & - & -
 \end{array}$$

$$\begin{array}{ccccccccc}
 & 55 & 27 & 13 & 6 & 3 & 1 \\
 n = 110 & 2 \overline{)110} & 2 \overline{)55} & 2 \overline{)27} & 2 \overline{)13} & 2 \overline{)6} & 2 \overline{)3} \\
 & \underline{10} & \underline{54} & \underline{2} & \underline{6} & \underline{0} & \underline{1} \\
 01101110 & & 1 & 07 & 6 & &
 \end{array}$$

$$i = 105 \quad 2 \overline{)105} \quad 2 \overline{)52} \quad 2 \overline{)26} \quad 2 \overline{)13} \quad 2 \overline{)6} \quad 2 \overline{)3}$$

$$\begin{array}{r} 52 \\ 10 \\ \hline 5 \\ 5 \\ \hline 0 \end{array} \quad \begin{array}{r} 26 \\ 52 \\ \hline 4 \\ 4 \\ \hline 0 \end{array} \quad \begin{array}{r} 13 \\ 26 \\ \hline 26 \\ 0 \end{array} \quad \begin{array}{r} 6 \\ 13 \\ \hline 12 \\ 1 \\ \hline 0 \end{array} \quad \begin{array}{r} 3 \\ 6 \\ \hline 6 \\ 0 \\ \hline 0 \end{array} \quad \begin{array}{r} 2 \\ 3 \\ \hline 2 \\ 1 \\ \hline 1 \end{array}$$

01101001

$$v = 118 \quad 2 \overline{)118} \quad 2 \overline{)59} \quad 2 \overline{)29} \quad 2 \overline{)14} \quad 2 \overline{)7} \quad 2 \overline{)3}$$

$$\begin{array}{r} 59 \\ 118 \\ \hline 10 \\ 10 \\ \hline 8 \\ 8 \\ \hline 0 \end{array} \quad \begin{array}{r} 29 \\ 59 \\ \hline 4 \\ 4 \\ \hline 9 \\ 9 \\ \hline 0 \end{array} \quad \begin{array}{r} 14 \\ 29 \\ \hline 2 \\ 0 \\ \hline 14 \\ 14 \\ \hline 0 \end{array} \quad \begin{array}{r} 7 \\ 14 \\ \hline 7 \\ 7 \\ \hline 0 \end{array} \quad \begin{array}{r} 3 \\ 7 \\ \hline 6 \\ 1 \\ \hline 1 \end{array}$$

01110110

$$e = 101 \quad 2 \overline{)101} \quad 2 \overline{)50} \quad 2 \overline{)25} \quad 2 \overline{)12} \quad 2 \overline{)6} \quad 2 \overline{)3}$$

$$\begin{array}{r} 101 \\ 50 \\ \hline 10 \\ 50 \\ \hline 0 \end{array} \quad \begin{array}{r} 25 \\ 50 \\ \hline 25 \\ 25 \\ \hline 0 \end{array} \quad \begin{array}{r} 12 \\ 25 \\ \hline 12 \\ 12 \\ \hline 0 \end{array} \quad \begin{array}{r} 6 \\ 12 \\ \hline 6 \\ 6 \\ \hline 0 \end{array} \quad \begin{array}{r} 3 \\ 6 \\ \hline 3 \\ 2 \\ \hline 1 \end{array}$$

01100101

$$r = 114 \quad 2 \overline{)114} \quad 2 \overline{)57} \quad 2 \overline{)28} \quad 2 \overline{)14} \quad 2 \overline{)7} \quad 2 \overline{)3}$$

$$\begin{array}{r} 114 \\ 57 \\ \hline 10 \\ 57 \\ \hline 17 \\ 17 \\ \hline 0 \end{array} \quad \begin{array}{r} 28 \\ 57 \\ \hline 28 \\ 28 \\ \hline 0 \end{array} \quad \begin{array}{r} 14 \\ 28 \\ \hline 14 \\ 14 \\ \hline 0 \end{array} \quad \begin{array}{r} 7 \\ 14 \\ \hline 7 \\ 7 \\ \hline 0 \end{array} \quad \begin{array}{r} 3 \\ 7 \\ \hline 6 \\ 1 \\ \hline 1 \end{array}$$

01110010

$$s = 115 \quad 2 \overline{)115} \quad 2 \overline{)57} \quad 2 \overline{)28} \quad 2 \overline{)14} \quad 2 \overline{)7} \quad 2 \overline{)3}$$

$$\begin{array}{r} 115 \\ 57 \\ \hline 10 \\ 57 \\ \hline 17 \\ 17 \\ \hline 0 \end{array} \quad \begin{array}{r} 28 \\ 57 \\ \hline 28 \\ 28 \\ \hline 0 \end{array} \quad \begin{array}{r} 14 \\ 28 \\ \hline 14 \\ 14 \\ \hline 0 \end{array} \quad \begin{array}{r} 7 \\ 14 \\ \hline 7 \\ 7 \\ \hline 0 \end{array} \quad \begin{array}{r} 3 \\ 7 \\ \hline 6 \\ 1 \\ \hline 1 \end{array}$$

01110011

$$i = 105 \quad d = 100 \quad 2 \overline{)100} \quad 2 \overline{)50} \quad 2 \overline{)25} \quad 2 \overline{)12} \quad 2 \overline{)6} \quad 2 \overline{)3}$$

$$\begin{array}{r} 100 \\ 50 \\ \hline 10 \\ 50 \\ \hline 0 \end{array} \quad \begin{array}{r} 25 \\ 50 \\ \hline 25 \\ 25 \\ \hline 0 \end{array} \quad \begin{array}{r} 12 \\ 25 \\ \hline 12 \\ 12 \\ \hline 0 \end{array} \quad \begin{array}{r} 6 \\ 12 \\ \hline 6 \\ 6 \\ \hline 0 \end{array} \quad \begin{array}{r} 3 \\ 6 \\ \hline 3 \\ 2 \\ \hline 1 \end{array}$$

01101001

$$a = 97 \quad 2 \overline{)97} \quad 2 \overline{)48} \quad 2 \overline{)24} \quad 2 \overline{)12} \quad 2 \overline{)6} \quad 2 \overline{)3}$$

$$\begin{array}{r} 97 \\ 48 \\ \hline 8 \\ 48 \\ \hline 0 \\ 0 \end{array} \quad \begin{array}{r} 24 \\ 48 \\ \hline 24 \\ 24 \\ \hline 0 \end{array} \quad \begin{array}{r} 12 \\ 24 \\ \hline 12 \\ 12 \\ \hline 0 \end{array} \quad \begin{array}{r} 6 \\ 12 \\ \hline 6 \\ 6 \\ \hline 0 \end{array} \quad \begin{array}{r} 3 \\ 6 \\ \hline 3 \\ 2 \\ \hline 1 \end{array}$$

01100001

$$d = 100 = 01100100$$

$$= 32 \quad 2 \overline{)32} \quad 2 \overline{)16} \quad 2 \overline{)8} \quad 2 \overline{)4} \quad 2 \overline{)2} \quad G = 71 \quad 2 \overline{)71} \quad 2 \overline{)35} \quad 2 \overline{)17} \quad 2 \overline{)8} \quad 2 \overline{)6} \quad 2 \overline{)3}$$

$$\begin{array}{r} 32 \\ 16 \\ \hline 2 \\ 16 \\ \hline 0 \end{array} \quad \begin{array}{r} 16 \\ 16 \\ \hline 8 \\ 8 \\ \hline 0 \end{array} \quad \begin{array}{r} 8 \\ 8 \\ \hline 4 \\ 4 \\ \hline 0 \end{array} \quad \begin{array}{r} 4 \\ 4 \\ \hline 2 \\ 2 \\ \hline 0 \end{array} \quad \begin{array}{r} 2 \\ 2 \\ \hline 1 \\ 1 \\ \hline 0 \end{array} \quad \begin{array}{r} 35 \\ 71 \\ \hline 6 \\ 71 \\ \hline 10 \\ 10 \\ \hline 4 \\ 4 \\ \hline 0 \end{array} \quad \begin{array}{r} 17 \\ 35 \\ \hline 15 \\ 15 \\ \hline 2 \\ 2 \\ \hline 0 \end{array} \quad \begin{array}{r} 8 \\ 17 \\ \hline 6 \\ 17 \\ \hline 10 \\ 10 \\ \hline 4 \\ 4 \\ \hline 0 \end{array} \quad \begin{array}{r} 6 \\ 17 \\ \hline 6 \\ 6 \\ \hline 0 \end{array} \quad \begin{array}{r} 3 \\ 6 \\ \hline 3 \\ 2 \\ \hline 1 \end{array}$$

00100000

$$a = 97 = 01100001 \quad i = 108 = 01101100$$

$$= 108 \quad 2 \overline{)108} \quad 2 \overline{)54} \quad 2 \overline{)27} \quad 2 \overline{)13} \quad 2 \overline{)6} \quad 2 \overline{)3}$$

$$\begin{array}{r} 108 \\ 54 \\ \hline 10 \\ 54 \\ \hline 0 \end{array} \quad \begin{array}{r} 27 \\ 54 \\ \hline 27 \\ 27 \\ \hline 0 \end{array} \quad \begin{array}{r} 13 \\ 27 \\ \hline 13 \\ 13 \\ \hline 0 \end{array} \quad \begin{array}{r} 6 \\ 13 \\ \hline 6 \\ 6 \\ \hline 0 \end{array} \quad \begin{array}{r} 3 \\ 6 \\ \hline 3 \\ 2 \\ \hline 1 \end{array}$$

01101100

$$i = 105 = 01101001 \quad i = 108 = 01101100$$

$$e = 101 = 01100101 \quad o = 111 = 2 \overline{)111} \quad 2 \overline{)55} \quad 2 \overline{)27} \quad 2 \overline{)13} \quad 2 \overline{)6} \quad 2 \overline{)3}$$

$$\begin{array}{r} 111 \\ 55 \\ \hline 10 \\ 55 \\ \hline 10 \\ 10 \\ \hline 0 \end{array} \quad \begin{array}{r} 27 \\ 55 \\ \hline 27 \\ 27 \\ \hline 0 \end{array} \quad \begin{array}{r} 13 \\ 27 \\ \hline 13 \\ 13 \\ \hline 0 \end{array} \quad \begin{array}{r} 6 \\ 13 \\ \hline 6 \\ 6 \\ \hline 0 \end{array} \quad \begin{array}{r} 3 \\ 6 \\ \hline 3 \\ 2 \\ \hline 1 \end{array}$$

01101111

$$= 46 \quad 2 \overline{)46} \quad 2 \overline{)23} \quad 2 \overline{)11} \quad 2 \overline{)5} \quad 2 \overline{)2} \quad 01101111$$

$$\begin{array}{r} 46 \\ 23 \\ \hline 4 \\ 23 \\ \hline 0 \\ 0 \\ \hline 0 \end{array} \quad \begin{array}{r} 23 \\ 46 \\ \hline 23 \\ 23 \\ \hline 0 \end{array} \quad \begin{array}{r} 11 \\ 23 \\ \hline 11 \\ 11 \\ \hline 0 \end{array} \quad \begin{array}{r} 5 \\ 11 \\ \hline 5 \\ 5 \\ \hline 0 \end{array} \quad \begin{array}{r} 2 \\ 5 \\ \hline 2 \\ 1 \\ \hline 0 \end{array}$$

00101110

01000101 01101101 01110000 01100101 01111010 01100001 01101101
01101111 00111001 00100000 01100101 01101100 00100000 0110100
10000010 01100011 01101110 01101001 01100011 01101111 00100000
(01100010) 01100101 01101110 00100000 01101100 01100001 00100000
01010101 01101110 01101001 01110110 01100101 01110010 01110011
01101001 01100100 01100001 01100100 00100000 01000111 01100001
01101100 01101001 01101100 01100101 01101111 00101110

2. "José Quezada"

2. José Quezada							
$J = 74$	$2\overline{)74}$	$2\overline{)37}$	$2\overline{)18}$	$2\overline{)9}$	$2\overline{)4}$	$2\overline{)2}$	$2\overline{)1}$
01001000	$\frac{37}{14}$	$\frac{18}{7}$	$\frac{9}{8}$	$\frac{4}{1}$	$\frac{2}{0}$	$\frac{1}{0}$	
$O = 111$	$2\overline{)111}$	$2\overline{)55}$	$2\overline{)27}$	$2\overline{)13}$	$2\overline{)6}$	$2\overline{)3}$	1
01101111	$\frac{10}{10}$	$\frac{4}{15}$	$\frac{2}{12}$	$\frac{1}{1}$	$\frac{6}{0}$	$\frac{2}{1}$	
$S = 115$	$2\overline{)115}$	$2\overline{)57}$	$2\overline{)28}$	$2\overline{)14}$	$2\overline{)7}$	$2\overline{)3}$	1
01110011	$\frac{10}{15}$	$\frac{4}{17}$	$\frac{2}{8}$	$\frac{1}{0}$	$\frac{6}{1}$	$\frac{2}{1}$	
$e = 130$	$2\overline{)130}$	$2\overline{)65}$	$2\overline{)32}$	$2\overline{)16}$	$2\overline{)8}$	$2\overline{)4}$	1
10000010	$\frac{10}{10}$	$\frac{5}{05}$	$\frac{2}{12}$	$\frac{1}{0}$	$\frac{8}{0}$	$\frac{4}{0}$	
$z = 32$	$2\overline{)32}$	$2\overline{)16}$	$2\overline{)8}$	$2\overline{)4}$	$2\overline{)2}$		
00100000	$\frac{32}{32}$	$\frac{16}{16}$	$\frac{8}{0}$	$\frac{4}{0}$	$\frac{2}{0}$		
$Q = 81$	$2\overline{)81}$	$2\overline{)40}$	$2\overline{)20}$	$2\overline{)10}$	$2\overline{)5}$	$2\overline{)2}$	1
01010001	$\frac{8}{01}$	$\frac{40}{80}$	$\frac{20}{0}$	$\frac{10}{0}$	$\frac{5}{0}$	$\frac{2}{1}$	
$u = 117$	$2\overline{)117}$	$2\overline{)58}$	$2\overline{)29}$	$2\overline{)14}$	$2\overline{)7}$	$2\overline{)3}$	1
01110101	$\frac{10}{17}$	$\frac{4}{18}$	$\frac{2}{9}$	$\frac{1}{0}$	$\frac{7}{1}$	$\frac{3}{1}$	
$e = 01100101$			$z = 122$	$2\overline{)122}$	$2\overline{)61}$	$2\overline{)30}$	$2\overline{)15}$
				$\frac{61}{62}$	$\frac{30}{61}$	$\frac{15}{30}$	$2\overline{)7}$
					$\frac{1}{01}$	$\frac{44}{30}$	$\frac{3}{7}$
						$\frac{6}{1}$	$\frac{1}{1}$
			$z = 1111010$	$\frac{10}{02}$			

$a = 97$	$2\overline{)48}$	$2\overline{)48}$	$2\overline{)24}$	$2\overline{)12}$	$2\overline{)6}$	$2\overline{)3}$
01100001	$\frac{1}{2}$	$\frac{4}{8}$	$\frac{2}{4}$	$\frac{1}{0}$	$\frac{1}{0}$	$\frac{1}{1}$
	$\frac{1}{1}$	$\frac{3}{0}$				
$d = 100$	$2\overline{)100}$	$2\overline{)50}$	$2\overline{)25}$	$2\overline{)12}$	$2\overline{)6}$	$2\overline{)3}$
01100100	$\frac{10}{00}$	$\frac{50}{0}$	$\frac{25}{0}$	$\frac{12}{0}$	$\frac{6}{0}$	$\frac{3}{0}$
$a > 97$						
01100001						

01001010	01101111	01110011	11101001	00100000	01010001
01110101	01100101	01111010	01100001	01100100	01100001