

☐ ☐ ☐

DOM	SEG	TER	QUA	QUI	SEX	SÁB
DOM	LUN	MAR	MEI	JUN	VII	SAB
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Exercícios

1) Converta para a base decimal

a) 101010

$$32 + 8 + 2 = 42$$

(42)₁₀

b) 11011001100

$$1024 + 512 + 256 + 128 + 64 + 32 + 16 + 8 + 4 = 1740$$

(1740)₁₀

c) 1011111

$$64 + 16 + 8 + 4 + 2 + 1 = 95$$

(95)₁₀

d) 10001001

$$128 + 8 + 1 = 137$$

(137)₁₀

e) 2165₁₆

$$2 \times 4096 + 1 \times 256 + 6 \times 16 + 5 \times 1 = 8549$$

(8549)₁₀

f) 1FA2

$$1 \times 4096 + 15 \times 256 + 10 \times 16 + 2 \times 1 = 8098$$

(8098)₁₀

g) E1B

$$14 \times 256 + 16 + 11 \times 1 = 3611$$

(3611)₁₀

h) CD3

$$12 \times 256 + 13 \times 16 + 3 \times 1 = 3283$$

(3283)₁₀

2) Converta para binário

a) 1072₁₀

1072₁₀

0	536	2
0	268	2
0	134	2
0	67	2
1	33	2
1	16	2
0	8	2
0	4	2
0	2	2
0	1	2

10000110000

□ □ □

b) 127 to 2

① 63 2
① 31 2
① 15

15 12
① 7 2
① 3 2
① 1

R: 11111111

c) 35 to 2

① 17 2
① 8 2
① 4

4 12
① 2 2
① 1

R: 100011

d) 165 12

1 82 2
0 41 2
1 20

20 12
0 10 2
0 5

5 12
1 2 2
0 1

R: 10100101

e) DC49 to 6

13 12
① 6 12
① 3 2
① 1

12 12
① 6 12
① 3 2
① 1

4 12
① 2 2
① 1
0100

9 12
① 4 12
① 2 12
① 1

R: 1101110001001001

f) AB to 6

10 12
0 5 12
1 2 2
0 1

14 12
1 5 2
1 2 2
0 1

7 12
1 3 2
1 1
0 1 1 1

R: 101010110111

g) 984

278 12
1001 0 4 12
0 2 12
0 1

4 12
0 2 2
0 1
0 100

h) F1E2

F → 1111
1 → 0001
E → 1110
2 → 0010

R: 100110000100

R: 1111000111100010



3) Converter PARA Hexadecimal

a) 567₁₀

b) 1010₁₀

7 35 16

63 16

3 2

3 16

R: 237ad

R: 3F2

c) 65ad₁₆

d) 680ad₁₆

1 4

8

42 16

R: 2A8

R: 41

10 2

e) 1100101010101010

4 1 8 2 4 1

R: CA5A

C A 5 A

f) 110100001000111011010

D 0 1 D A

R: D01DA

g) 1110110100010001

E D 1 1

R: ED11

h) 1011000011001010

B 0 0 A

R: B0CA

4) Realize as operações

a) 11100 + 10011

11100

2 → 10 - 10 = 0

10011

101111

b) 10011 + 1111

10011

3 → 11 - 10 = 1

1111

2 → 10 - 10 = 0

100010

c) 101010 + 1010101

d) 111 + 11110

101010

1111

3 → 11 - 10 = 1

1010101

11110

1111111

100101

1111111

e) $456 + 2A9$	f) $213 + 978$	g) $ABC + DEF$
$\begin{array}{r} 456 \\ + 2A9 \\ \hline 6FF \end{array}$	$\begin{array}{r} 213 \\ + 978 \\ \hline B8B \end{array}$	$\begin{array}{r} ABC \\ + DEF \\ \hline LABB \end{array}$

$27 - 16 = 11$

$24 - 16 = 8$

h) $BOCA + DED0$

$\begin{array}{r} BOCA \\ + DED0 \\ \hline 18FA \end{array}$	$25 - 16 = 9$	$24 - 16 = 8$
--	---------------	---------------

5) Realize as operações

a) $11100 - 10011$

$$\begin{array}{r} 11100 \\ - 10011 \\ \hline 01001 \end{array}$$

b) $10011 - 1111$

$$\begin{array}{r} 10011 \\ - 1111 \\ \hline 00100 \end{array}$$

c) $1010101 - 101010$

$$\begin{array}{r} 1010101 \\ - 101010 \\ \hline 0101011 \end{array}$$

d) $11110 - 111$

$$\begin{array}{r} 11110 \\ - 111 \\ \hline 10111 \end{array}$$

e) $456 - 2A9$

$\begin{array}{r} 456 \\ - 2A9 \\ \hline 1AD \end{array}$	$(16 + 6) - 9 = 15$	$(16 + 4) - 10 = 10$
---	---------------------	----------------------

f) $978 - 213$

$$\begin{array}{r} 978 \\ - 213 \\ \hline 765 \end{array}$$

g) $DBF - ACF$

$\begin{array}{r} DBF \\ - ACF \\ \hline 2F8 \end{array}$	$16 + 7 = 23 - 15 = 8$	$16 + 10 = 26 - 12 = 14$
---	------------------------	--------------------------

h) $DEDO - BOCA$

$\begin{array}{r} DEDO \\ - BOCA \\ \hline 2E06 \end{array}$
--