Adunarea a două numere

1.

$$\begin{array}{r} {\scriptstyle 1\ 1\ 1\ 1\ 1\ 1\ 1\ 1\ 1\ 1\ 1\ 1\ 1\ 1\ 1\ 1} \\ 1\,1\,1\,0\,0\,1\,1\,1\,0\,0\,1\,1\,1\,0\,1\,0\,1_{(2)} + \\ 1\,1\,0\,1\,1\,1\,1\,0\,1\,1\,1\,1\,1_{(2)} \\ \hline 1\,1\,1\,1\,0\,1\,0\,1\,0\,0\,1\,0\,1\,0\,1\,0\,0_{(2)} \end{array}$$

2.

$$\begin{array}{r} {\scriptstyle 1\ 1} \\ 23045_{(6)} + \\ 10254_{(6)} \\ \hline 123343_{(6)} \end{array}$$

3.

$$\begin{array}{r} {\scriptstyle \cdot\ 1\ \ 1} \\ 54ABGF_{(16)} + \\ CD097D_{(16)} \\ \hline 121B4EC_{(16)} \end{array}$$

4.

$$\begin{array}{r} {\scriptstyle 1\ 1\ 1\ 1\ 1\ 1\ 1} \\ 2122012_{(3)} + \\ 1011222_{(3)} \\ \hline 2001201 1_{(3)} \end{array}$$

5.

$$\begin{array}{r} {\scriptstyle 1\ 1\ \ \ \ \ 1\ 1} \\ 3220013_{(4)} + \\ 2230323 1_{(4)} \\ \hline 3212331 0_{(4)} \end{array}$$

6.

$$\begin{array}{r} {\scriptstyle \ 1\ 1\ 1\ \ \ 1\ 1} \\ 3401323_{(5)} + \\ \ \ 4443 03_{(5)} \\ \hline 4400411_{(5)} \end{array}$$

7.

$$\begin{array}{r} {\scriptstyle 1\ 1\ 1\ 1} \\ 6543210_{(7)} + \\ \ \ 6644 55_{(7)} \\ \hline 1054065_{(7)} \end{array}$$

8.
$$\begin{array}{r} {\scriptstyle 1\ 1\ 1\ \ \ 1\ 1} \\ 5\,6\,7\,7\,0\,3\,4_{(8)} + \\ 1\,2\,3\,4\,5\,6\,7_{(8)} \\ \hline 7\,1\,3\,3\,6\,2\,3_{(8)} \end{array}$$

9.
$$\begin{array}{r} {\scriptstyle 1\ \ \ 1\ 1\ 1} \\ A\,B\,C\,D\,E_{(16)} + \\ D\,9\,0\,3\,7\,F_{(16)} \\ \hline E\,3\,C\,0\,5\,D_{(16)} \end{array}$$

10.
$$\begin{array}{r} {\scriptstyle 1\ 1\ 1\ 1\ \ \ 1\ 1\ 1\ 1} \\ 1\,1\,0\,0\,1\,0\,1\,0\,1\,1_{(2)} + \\ \ \ \ 1\,1\,1\,0\,1\,1\,0\,1 \\ \hline 1\,0\,0\,0\,0\,0\,1\,1\,0\,0\,0_{(2)} \end{array}$$

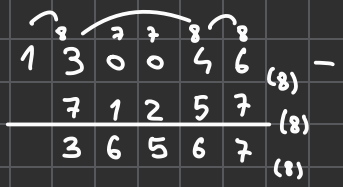
Scădeți a doua numere

1.
$$\begin{array}{r} {\scriptstyle 1\ 1\ 2\ \ \ 2\ 1\ 1\ 1\ 2\ 2} \\ 1\,0\,0\,0\,1\,1\,0\,0\,0\,1\,0_{(2)} - \\ \ \ 1\,1\,1\,0\,1\,1\,1\,0\,1\,1_{(2)} \\ \hline \ \ \ \ \ 1\,0\,1\,0\,0\,1\,1\,1_{(2)} \end{array}$$

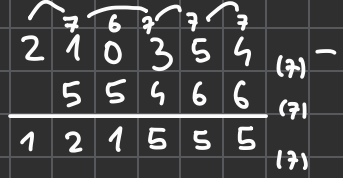
2.
$$\begin{array}{r} {\scriptstyle 8\ 9\ 9} \\ 1\,0\,2\,3\,8\,7_{(9)} - \\ \ \ 6\,4\,5\,0\,2_{(9)} \\ \hline \ \ 2\,6\,7\,8\,5_{(9)} \end{array}$$

3.
$$\begin{array}{r} {\scriptstyle 15\ 16\ 16\ 16} \\ 5\,0\,1\,B\,A_{(16)} - \\ \ \ 3\,2\,E\,D_{(16)} \\ \hline 4\,C\,E\,C\,D_{(16)} \end{array}$$

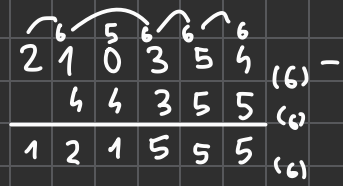
4.


8 7 7 8 8
1 3 0 0 4 6 (8) −
7 1 2 5 7 (8)
3 6 5 6 7 (8)

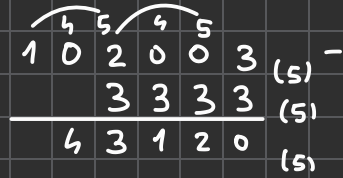
5.


7 6 7 7 7
2 1 0 3 5 4 (7) −
5 5 4 6 6 (7)
1 2 1 5 5 5 (7)

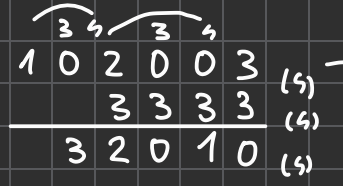
6.


6 5 6 6 6
2 1 0 3 5 4 (6) −
4 4 3 5 5 (6)
1 2 1 5 5 5 (6)

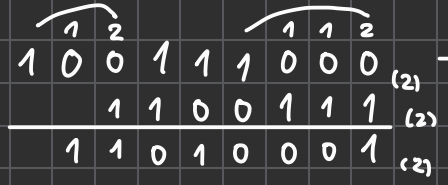
7.


4 5 4 5
1 0 2 0 0 3 (5) −
3 3 3 3 (5)
4 3 1 2 0 (5)

8.


3 4 3 4
1 0 2 0 0 3 (5) −
3 3 3 3 (4)
3 2 0 1 0 (5)

9.


1 2 1 1 2
1 0 0 1 1 1 0 0 0 (2) −
1 1 0 0 1 1 1 (2)
1 1 0 1 0 0 0 1 (2)

10.


16 15 15 16
1 0 B 0 0 9 (16) −
A 5 F C D (16)
6 5 0 3 C (16)

Înmulțirea cu o cifră

1.
$$\begin{array}{r} {\scriptstyle 1\ 1} \\ 7023_{(8)} \\ \times\quad 5_{(8)} \\ \hline 54137_{(8)} \end{array}$$

2.
$$\begin{array}{r} {\scriptstyle 1\ \ \ \ \ \ 4} \\ 32001B_{(16)} \\ \times\quad 6_{(16)} \\ \hline 12C00A2_{(16)} \end{array}$$

3.
$$\begin{array}{r} {\scriptstyle 1\ 2\ 3\ 3} \\ 12345_{(7)} \\ \times\quad 5_{(7)} \\ \hline 65424_{(7)} \end{array}$$

4.
$$\begin{array}{r} {\scriptstyle 1\ 2\ 3\ 4\ 4} \\ 12345_{(6)} \\ \times\quad 5_{(6)} \\ \hline 111101_{(6)} \end{array}$$

5.
$$\begin{array}{r} {\scriptstyle 1\ \ 1\ \ 1} \\ 31203_{(5)} \\ \times\quad 3_{(5)} \\ \hline 144114_{(5)} \end{array}$$

6.
$$\begin{array}{r} {\scriptstyle 2\ 1\ 1\ \ \ 2} \\ 31203_{(4)} \\ \times\quad 3_{(4)} \\ \hline 220221_{(4)} \end{array}$$

7.
$$\begin{array}{r} {\scriptstyle 1\ 1\ 5\ 5\ 2} \\ 21563_{(8)} \\ \times\quad 7_{(8)} \\ \hline 174054_{(8)} \end{array}$$

8.

$A23F4_{(16)} \cdot B_{(16)} = 6F8B7C_{(16)}$

$(4 \cdot 11 + 0) : 16 = 44 : 16 = 2 \text{ r } 12$

$(15 \cdot 11 + 2) : 16 = 167 : 16 = 10 \text{ r } 7$

$(3 \cdot 11 + 10) : 16 = 43 : 16 = 2 \text{ r } 11$

$(2 \cdot 11 + 2) : 16 = 24 : 16 = 1 \text{ r } 8$

$(10 \cdot 11 + 1) : 16 = 111 \cdot 16 = 6 \text{ r } 15$

Împărțiri la o cifră

1.

$20101_{(3)} : 2_{(3)} = 10012_{(3)}$ rest $0_{(3)}$

2

$=0$

0

$=1$

0

10

2

11

11

$==$

2.

$1FED0205_{(16)} : 9_{(16)} = 38C1CAB_{(16)}$ п $2_{(16)}$

(0 · 16 + 1) : 9 = 0 п 1

(1 · 16 + 15) : 9 = 3 п 4

(4 · 16 + 14) : 9 = 78 : 9 = 8 п 6

(6 · 16 + 13) : 9 = (96 + 13) : 9 = 109 : 9 = 12 п 1

(1 · 16 + 0) : 9 = 1 п 7

(7 · 16 + 2) : 9 = 114 : 9 = 12 п 6

(6 · 16 + 0) : 9 = 96 : 9 = 10 п 6

(6 · 16 + 5) : 9 = 101 : 9 = 11 п 2

3.

$120456_{(8)} : 6_{(8)} = 15335_{(8)}$ п $0_{(8)}$

(8 · 0 + 1) : 6 = 0 п 1

(8 · 1 + 2) : 6 = 1 п 4

(8 · 4 + 0) : 6 = 5 п 2

(8 · 2 + 4) : 6 = 3 п 2

(8 · 2 + 5) : 6 = 3 п 3

(8 · 3 + 6) : 6 = 5 п 0

4.

$120456_{(7)} : 6_{(7)} = 13421_{(8)} \text{ п } 0_{(8)}$

$(0 \cdot 7 + 1) : 6 = 0 \text{ п } 1$

$(1 \cdot 7 + 2) : 6 = 1 \text{ п } 3$

$(3 \cdot 7 + 0) : 6 = 3 \text{ п } 3$

$(3 \cdot 7 + 4) : 6 = 4 \text{ п } 1$

$(1 \cdot 7 + 5) \cdot 6 = 2 \text{ п } 0$

$(0 \cdot 7 + 6) : 6 = 1 \text{ п } 0$

5.

$321023_{(5)} : 3_{(5)} = 103322_{(5)} \text{ п } 2_{(5)}$

$(0 \cdot 5 + 3) : 3 = 1 \text{ п } 0$

$(0 \cdot 5 + 2) : 3 = 0 \text{ п } 2$

$(2 \cdot 5 + 1) : 3 = 3 \text{ п } 2$

$(2 \cdot 5 + 0) : 3 = 3 \text{ п } 1$

$(1 \cdot 5 + 2) : 3 = 2 \text{ п } 1$

$(1 \cdot 5 + 3) : 3 = 2 \text{ п } 2$

6.

$321023_{(4)} : 3_{(4)} = 103003_{(4)} \text{ п } 2_{(4)}$

$(0 \cdot 4 + 3) : 3 = 1 \text{ п } 0$

$(0 \cdot 4 + 2) : 3 = 0 \text{ п } 2$

$(2 \cdot 4 + 1) : 3 = 3$ Rest 0

$(0 \cdot 4 + 0) : 3 = 0$ Rest 0

$(0 \cdot 4 + 2) : 3 = 0$ Rest 2

$(2 \cdot 4 + 3) : 3 = 3$ Rest 2

7.

$2A0F86_{(16)} \cdot E_{(16)} = 3011B_{(16)}$ Rest $C_{(16)}$

$(0 \cdot 16 + 2) : 14 = 0$ Rest 2

$(2 \cdot 16 + 10) : 14 = 3$ Rest 0

$(0 \cdot 16 + 0) : 14 = 0$ Rest 0

$(0 \cdot 16 + 15) : 14 = 1$ Rest 1

$(1 \cdot 16 + 8) : 14 = 1$ Rest 10

$(10 \cdot 16 + 6) : 14 = 11$ Rest 12

8.

$765433_{(8)} : 4_{(8)} = 175306_{(8)}$ Rest $3_{(8)}$

$(0 \cdot 8 + 7) : 4 = 1$ Rest 3

$(3 \cdot 8 + 6) : 4 = 7$ Rest 2

$(2 \cdot 8 + 5) : 4 = 5$ Rest 1

$(1 \cdot 8 + 4) : 4 = 3$ Rest 0

$(0 \cdot 8 + 3) : 4 = 0$ Rest 3

$(3 \cdot 8 + 3) : 9 = 6$ R 3