Ime i prezime _____ Datum _____

Binarno zbrajanje

Zapamti

Binarno zbrajamo u stupcu, kao dekadski: $0+0=0$, $0+1=1$, $1+1=10_2$ (pišemo 0, prenosimo 1), $1+1+1=11_2$ (pišemo 1, prenosimo 1).

Primjer

$$\begin{array}{cccccc} & {\scriptstyle 1} & {\scriptstyle 1} & {\scriptstyle 1} & & \\ & 0 & 1 & 0 & 1 & \\ + & 0 & 0 & 1 & 1 & \\ \hline & 1 & 0 & 0 & 0 & \end{array}$$

Desno: $1+1=10_2$, pišemo 0, prenosimo 1.

Zatim: $1+0+1=10_2$ i $1+1+0=10_2$, te $1+0+0=1$.

Provjera: $5+3=8$ ✓

1 SAMOSTALNO Zbroji u stupcu i provjeri dekadski.

$$\begin{array}{cccccc} & \square & \square & \square & \square & \\ & 0 & 1 & 1 & 0 & \\ + & & 0 & 1 & 1 & 1 \\ \hline & \square & \square & \square & \square & \square \end{array}$$

Provjera: ☐

$$\begin{array}{cccccc} & \square & \square & \square & \square & \\ & 1 & 0 & 1 & 1 & \\ + & & 1 & 0 & 0 & 1 \\ \hline & \square & \square & \square & \square & \square \end{array}$$

Provjera: ☐

$$\begin{array}{cccccc} & \square & \square & \square & \square & \\ & 1 & 1 & 1 & 1 & \\ + & & 0 & 0 & 0 & 1 \\ \hline & \square & \square & \square & \square & \square \end{array}$$

Provjera: ☐

$$\begin{array}{cccccc} & \square & \square & \square & \square & \\ & 0 & 0 & 1 & 1 & \\ + & & 0 & 1 & 0 & 1 \\ \hline & \square & \square & \square & \square & \square \end{array}$$

Provjera: ☐

$$\begin{array}{cccccc} & \square & \square & \square & \square & \\ & 1 & 1 & 0 & 0 & \\ + & & 0 & 1 & 1 & 0 \\ \hline & \square & \square & \square & \square & \square \end{array}$$

Provjera: ☐

$$\begin{array}{cccccc} & \square & \square & \square & \square & \\ & 0 & 1 & 1 & 1 & \\ + & & 0 & 1 & 1 & 1 \\ \hline & \square & \square & \square & \square & \square \end{array}$$

Provjera: ☐

Imena u paru _____ Datum _____

2 U PARU **Pronađite pogrešku.** Mia je zbrojila $0110_2 + 0011_2 = 1011_2$. Provjerite dekadski, pronađite pogrešku i zbrojite točno.

$$\begin{array}{r} \square\,\square\,\square\,\square \\ 0\;1\;1\;0 \\ +\;\;0\;0\;1\;1 \\ \hline \square\,\square\,\square\,\square\,\square \end{array}$$

_____

_____

_____

3 SAMOSTALNO Zbroji. Pazi na prijenos u novi stupac.

$$\begin{array}{r} \square\,\square\,\square\,\square\,\square \\ 1\;0\;1\;1\;1 \\ +\;\;\;1\;1\;0\;1 \\ \hline \square\,\square\,\square\,\square\,\square\,\square \end{array}$$

Provjera: ☐

$$\begin{array}{r} \square\,\square\,\square\,\square\,\square \\ 1\;1\;1\;1 \\ +\;\;1\;1\;1\;1 \\ \hline \square\,\square\,\square\,\square\,\square\,\square \end{array}$$

Provjera: ☐

4 U PARU Zbroj dvaju 4-bitnih brojeva može imati više bitova. Koji je najveći mogući zbroj? Koliko bitova ima?

☐ = ☐ bitova: ☐

Aplikacija Binarno zbrajanje · otooly.com/binarno-zbrajanje

Način **Računaj**: upiši dva broja i prati prijenose korak po korak; **Vježbaj** zadaje nove zadatke.

★ SAMOSTALNO **Izlazna kartica.** $1010_2 + 0111_2 =$ ☐