

Dopuni!

Jens Carstensten & Alija Muminagić

U testovima provjere znanja nerijetko nalazimo i ovakva pitanja:

Dopuni navedene rečenice tako da budu točne:

- a) Svaka stranica trokuta manja je od _____, a veća od _____ druge dvije stranice.
 b) Dužina čije su krajnje točke vrh i središte nasuprotne stranice u trokutu naziva se _____.
 itd.

U ovom članku pitanje glasi:

Dopuni donji račun tekstom, tako da dobiješ jedan mali matematički članak.

$$\begin{aligned} 1) \quad & 138 = 3 \cdot 46 + 0, \\ & 46 = 3 \cdot 15 + 1, \\ & 15 = 3 \cdot 5 + 0, \\ & 5 = 3 \cdot 1 + 2, \\ & 2 = 3 \cdot 0 + 2, \end{aligned}$$

$$(138)_{10} = (22010)_3 = 2 \cdot 3^4 + 2 \cdot 3^3 + 0 \cdot 3^2 + 1 \cdot 3^1 + 0 \cdot 3^0;$$

$$2) \quad 138 = 3 \cdot 46 + 0,$$

$$\frac{138-0}{\frac{3}{2}} = \frac{2}{3} (138 - 0) = 92,$$

$$92 = 3 \cdot 30 + 2,$$

$$\frac{92-2}{\frac{3}{2}} = \frac{2}{3} (92-2) = 60,$$

$$60 = 3 \cdot 20 + 0,$$

$$\frac{2}{3} (60 - 0) = 40,$$

$$40 = 3 \cdot 13 + 1,$$

$$\frac{2}{3} (40 - 1) = 26,$$

$$26 = 3 \cdot 8 + 2,$$

$$\frac{2}{3} (26 - 2) = 16,$$

$$16 = 3 \cdot 5 + 1,$$

$$\frac{2}{3} (16 - 1) = 10,$$

$$10 = 3 \cdot 3 + 1,$$

$$\frac{2}{3} (10 - 1) = 6,$$

$$6 = 3 \cdot 2 + 0,$$

$$\frac{2}{3} (6 - 0) = 4,$$

$$4 = 3 \cdot 1 + 1,$$

$$\frac{2}{3} (4 - 1) = 2,$$

$$2 = 3 \cdot 0 + 2,$$

$$\frac{2}{3} (2 - 2) = 0,$$

$$(138)_{10} = (2101121020)_{\frac{3}{2}}$$

$$= 2 \left(\frac{3}{2}\right)^9 + 1 \cdot \left(\frac{3}{2}\right)^8 + 0 \cdot \left(\frac{3}{2}\right)^7 + 1 \cdot \left(\frac{3}{2}\right)^6 + 1 \cdot \left(\frac{3}{2}\right)^5 + 2 \cdot \left(\frac{3}{2}\right)^4 + 1 \cdot \left(\frac{3}{2}\right)^3 + 2 \cdot \left(\frac{3}{2}\right)^1 + 0 \cdot \left(\frac{3}{2}\right)^0.$$

(Napomena: $\frac{3}{2} > 1$).

Pokušajte!