

Mintogy

$$\left(\frac{7}{2}\right)^2 + \left(-\frac{7}{3}\right)^3 = -\frac{49}{108} < 0$$

az egyenlet mindhárom gyöke valós és egyenlő a következő értékekkel:

$$x_1 = 2\sqrt[3]{r} \sin \frac{\alpha}{3}$$

$$x_2 = 2\sqrt[3]{r} \sin \left( \frac{\alpha}{3} + 120^\circ \right)$$

$$-x_3 = 2\sqrt[3]{r} \sin \left( \frac{\alpha}{3} + 60^\circ \right)$$

hol

$$\sqrt[3]{r} = \sqrt{\frac{7}{3}}, \quad \sin \alpha = \frac{\frac{7}{2}}{\frac{7}{3}\sqrt{\frac{7}{3}}} = \frac{3}{2\sqrt{\frac{7}{3}}}$$

$$2\sqrt[3]{r} = \sqrt{\frac{28}{3}} = k.$$

A számítás menete tehát a következő:

$\begin{array}{r} \log 28 = 1,44716 \\ \log 3 = 0,47712 \\ \hline 0,97004 \end{array}$	$\begin{array}{r} 0,47712 \\ 0,48502 \\ \hline \log \sin \alpha = 9,99210 - 10 \\ \underline{209} \\ 100 : 5 \\ \alpha = 79^\circ 6' 20'' \\ \frac{\alpha}{3} = 26^\circ 22' 7'' \\ 9,74322 - 10 \\ 17 \\ \hline 9,74322 - 10 \end{array}$
$\begin{array}{r} \log k = 0,48502 \\ 9,64749 - 10 \\ \log \sin \frac{\alpha}{3} = \frac{3}{9,64752 - 10} \end{array}$	$\begin{array}{r} 0,48502 + \\ +9,99913 - 10 \\ \hline 0,48415 \\ 3,048 \\ 9 \\ \hline -x_3 = 3,0489 \\ x_3 = -3,6489 \end{array}$
$\begin{array}{r} \log \sin \left( \frac{\alpha}{3} + 120^\circ \right) = \\ \log x_1 = 0,48502 + \\ +9,64752 - 10 \\ \hline 0,13254 \\ \underline{226} \\ 28 \end{array}$	$\begin{array}{r} \log \sin \left( \frac{\alpha}{3} + 60^\circ \right) = 9,99913 - 10 \\ \hline 1,356401 \\ 914 \\ \hline x_1 = 1,3569 \end{array}$
$\begin{array}{r} \log x_2 = 0,48502 + \\ +9,74349 - 10 \\ \hline 0,22841 \\ \underline{840} \\ 1 \\ \hline x_2 = 1,6920 \end{array}$	$\begin{array}{r} x_1 = 1,3569 \\ x_2 = 1,6920 \\ 1,692x_3 = 3,0489 \\ \hline 0x_1 + x_2 + x_3 = 0 \end{array}$