Problem of the Week-5: A Radical System of Equations

Find all real solutions to the system of equations

\[
\begin{align*}
x + y &= \sqrt{4z - 1} \\
y + z &= \sqrt{4x - 1} \\
z + x &= \sqrt{4y - 1}
\end{align*}
\]

Of course, explain how you obtained your answer.

Posting Date 10/25/2010. Submit solutions to Noah Aydin, Mathematics Department, RBH 319 (e-mail or hard-copy, but hard copy submissions must include a time stamp) by 4 pm on 11/05/2010.