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Counter-example to Problem 1031.

$$\sqrt[3]{\frac{x^3-3x}{2}+\frac{(x^2-1)\sqrt{x^2-4}}{2}}+\sqrt[3]{\frac{x^3-3x}{2}-\frac{(x^2-1)\sqrt{x^2-4}}{2}}=x$$

When $x=1$,

$$\begin{aligned}
& \sqrt[3]{\frac{1^3-3}{2}+\frac{(1^2-1)\sqrt{1^2-4}}{2}}+\sqrt[3]{\frac{1^3-3}{2}-\frac{(1^2-1)\sqrt{1^2-4}}{2}} \\
= \;& \sqrt[3]{-1}+\sqrt[3]{-1} \\
= \;& -2 \\
\neq \;& 1
\end{aligned}$$

Another counter-example is when $x=-1$.

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