

## Ages of John's Three Daughters

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My friend John and I were traveling on the train from Edson to Vancouver to attend a mathematics conference. Because we had the compartment to ourselves, we could talk about anything and everything. We discussed the math sessions we intended to attend, but soon our conversation entered the personal realm.

John spoke about his family and how proud he was to be the father of three daughters. "How old are your daughters?" I asked John. Rather than answering my question readily, John instead created a mathematical problem for me—with the offer to pay for my meal if I could tell him how old his three daughters are.

John stated, "I have three daughters. The product of their ages is 36; the sum of their ages is my house number. How old are my daughters?" I thought for a while and said, "This isn't enough information to answer your question." John said, "You are right. I forgot to tell you that my oldest daughter and I went to the hospital last night to visit my mother-in-law." This information did not help me at first, but after some brooding and racking my brain, I recognized its importance and was able to determine the ages of John's three daughters.

Do you know how old the three daughters of my friend John are?