Exercise 4: Age and Shake (Logical Thinking)

Here are two logic puzzles. Try solving them now. If you don’t finish, you can keep working on them during the week if you want to. We’ll talk about the answers next time.

1. What are the ages?
   Two mathematicians are sitting together in a building. They don’t have anything to do at the moment, so one says to the other, “Try guessing the ages of my three children. I’ll give you a hint - the product of their ages is 72.” The other mathematician says, “That’s not enough information. Tell me more.” The first mathematician says, “Their ages add to be the number of this building.” The other mathematician goes outside, looks at the building number, comes back, and says, “That still isn’t enough information. Tell me more.” The mathematician says, “My youngest child’s name is Anne.”

   **Problem:** What are the ages of the children?

2. How many handshakes?
   A woman and her partner attend a party with four other couples. Some people shake hands with other people. Of course, no one shakes their own hand or the hand of the person they came with. When the woman asks the other (9) people present how many different people’s hands they shook they all gave a different answer.

   **Problem:** How many different people’s hands did the woman’s partner shake?