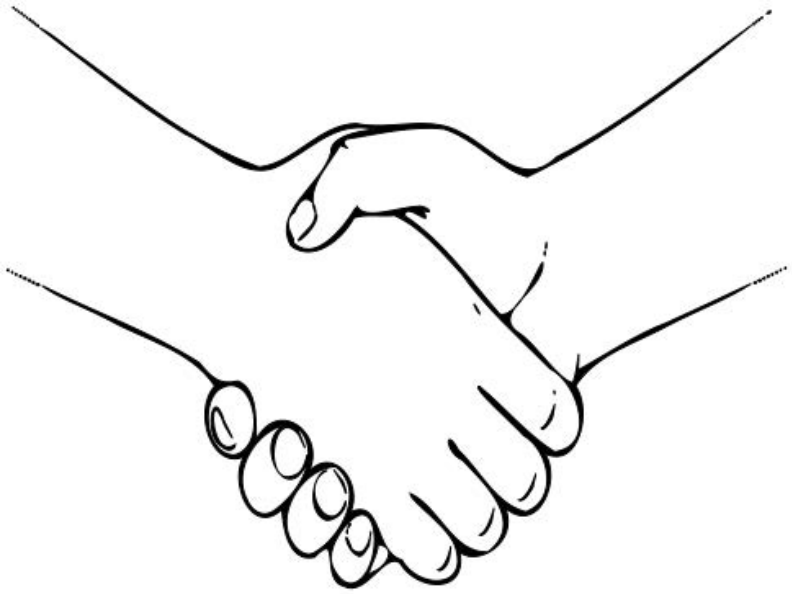
Puzzle of the Week

Handshakes at a Party – 2

Eight people were at a party. A lot of handshaking took place. When asked how many hands each person shook, they were amazed to discover that each number was different. When this was announced to the group, one person yelled out "That's impossible!"

THE CHALLENGE: Was that person right, did someone make a mistake in their handshake count? How do you know?



Puzzle of the Week

Handshakes at a Party – 2 – Notes

THE CHALLENGE: No one shakes their own hand. Therefore, for eight people, the maximum number of handshakes for any one person is seven. If the eight numbers are different, the list of numbers must be exactly the numbers from 0 to 7.

However, this cannot happen. If one person shook seven hands, then they shook every one else's hand at the party. That means each person was involved in at least one handshake, and that rules out the possibility of 0 handshakes. It is impossible to have all eight numbers from 0 to 7!