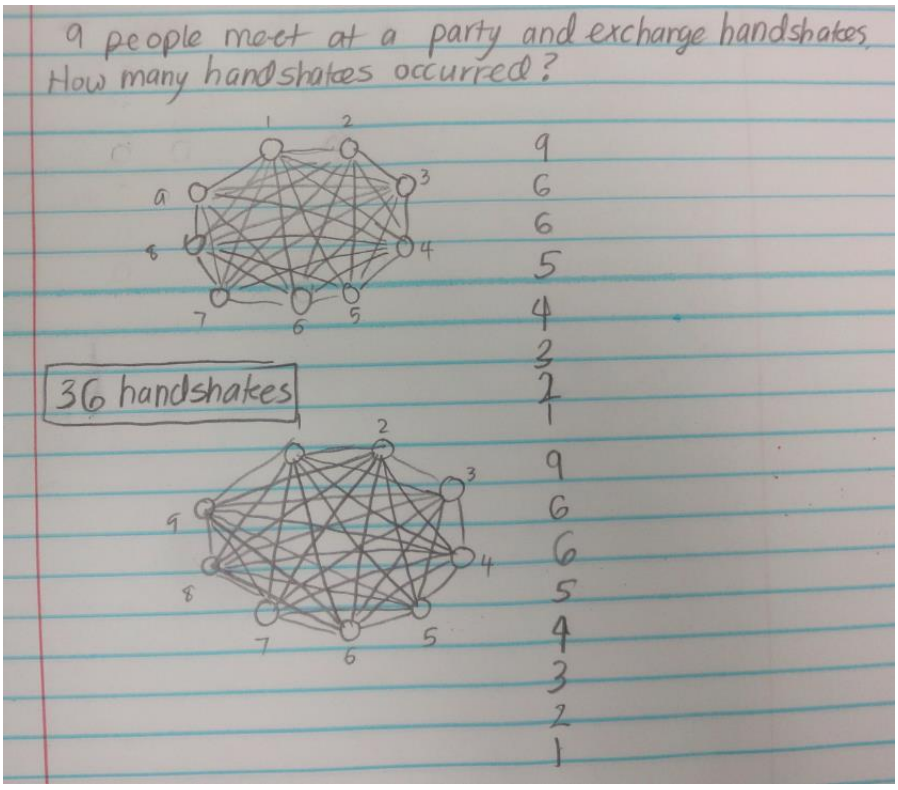
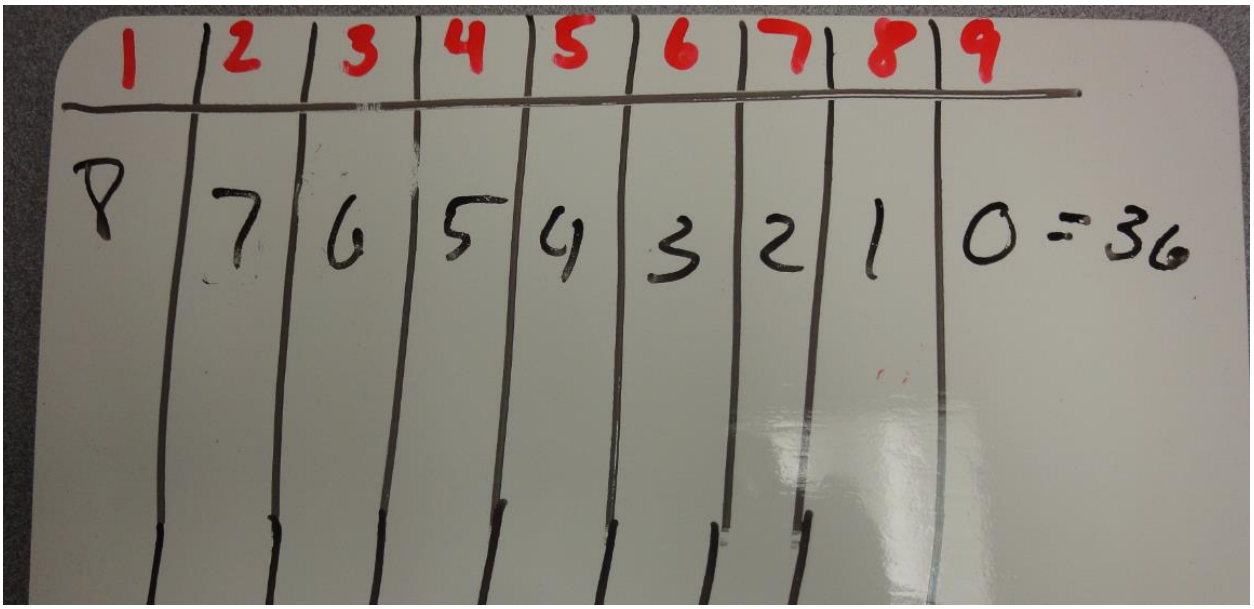
ALL SHOOK UP

Nine people meet at a party. They all exchange handshakes. How many handshakes are exchanged?

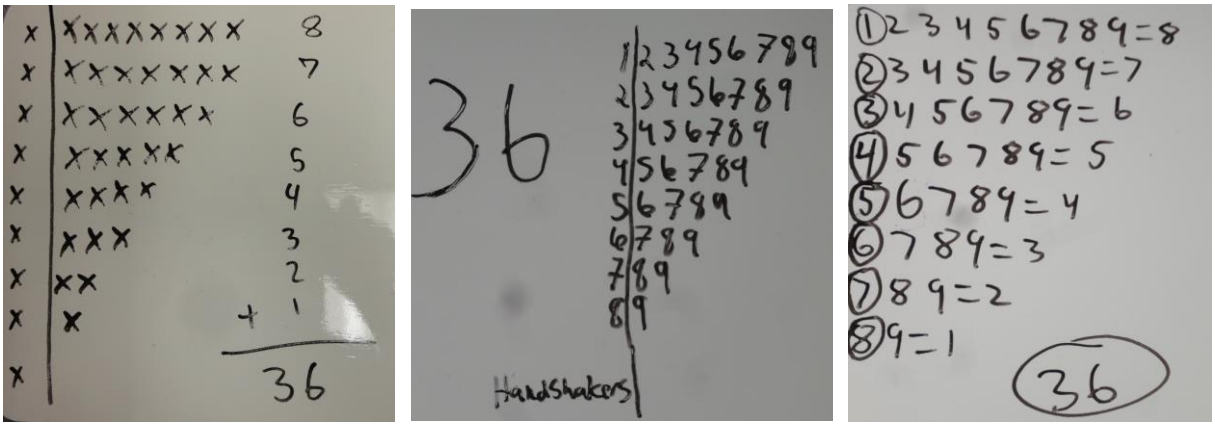
Source: Shutterstock



Notice the above work shows nine people in a circle and draws lines to indicate a handshake. For example, if a line is drawn from person 1 to person 4, we count this as **one** handshake. Thus, we avoid double counting. The answer is, in fact, 36 handshakes total.



This is another way to view the problem. Person 1 shakes with 8 people; Person 2 shakes with 7 people (because Person 1 already shook with Person 2); Person 3 shakes with 6 people and so on. Once you get to Person 9, there are no more handshakes (notice the 0). **LOOK CAREFULLY AND YOU WILL SEE THIS ON THE BOARDS BELOW AS WELL.** Add the numbers in black (not red) to get 36.



The similarities in the above solutions are self-evident! Just find a way to systematically organize your work.