# Counting Puzzles

**Practice**

*Orders and handshakes.*

Name: _____ Date: _____

**Think:** Every handshake is counted twice if you count per person — so divide by 2.

## 1. Solve each one. Reason it out!

**1)** In how many different orders can you arrange 3 different stickers in a strip? _____

**2)** In how many different orders can you arrange 3 different photos in a row? _____

**3)** A party menu has 4 starters, 2 mains, and 2 desserts. How many different three-course meals are possible? _____

**4)** A menu has 5 starters, 5 mains, and 3 desserts. How many different three-course meals are possible? _____

**5)** In how many different orders can you arrange 3 different flags on a pole? _____

**6)** A school-lunch menu has 3 starters, 2 mains, and 4 desserts. How many different three-course meals are possible? _____

**7)** In how many different orders can you arrange 3 different toys on a step? _____

**8)** A shop sells 3 kinds of shirts and 3 kinds of pairs of pants. How many one-of-each combinations are there? _____

**9)** 5 friends each shake hands with every other one exactly once. How many handshakes happen? _____

**10)** 5 cousins each shake hands with every other one exactly once. How many handshakes happen? _____