

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

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

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

7) A shop sells 3 kinds of ice-cream flavors and 7 kinds of toppings. How many one-of-each combinations are there? _____

9) 6 teammates each shake hands with every other one exactly once. How many handshakes happen? _____

2) A shop sells 7 kinds of covers and 5 kinds of stickers. How many one-of-each combinations are there? _____

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

6) 4 teammates each shake hands with every other one exactly once. How many handshakes happen? _____

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

10) 6 robots each shake hands with every other one exactly once. How many handshakes happen? _____