GCSE FOUNDATION · REVISION MAT 1

Listing and the product rule

1 A café offers a starter and a main course.

Starters: Soup, Melon
Main courses: Pizza, Curry, Pasta

List all the possible combinations.

2 Here are three digit cards: 3, 5, 8

Two cards are used to make a 2-digit number.

List all the numbers that can be made.

3 A café sells 4 sandwiches and 3 drinks.

A meal deal is one of each.

Sam says there are 7 different meal deals.

Explain why Sam is wrong.

4 Show that the letters of the word MATH can be arranged in 24 different orders.

5 A padlock code uses 3 digits. Each digit is 0 to 9.

(a) How many different codes are there?

(b) How many codes are there if the first digit must be odd?

6 Two people are chosen from Ava, Ben, Cal, Dee and Eli to be team captains.

List all the possible pairs.

How many pairs are there?

Mr&Mrs MATHS

ANSWERS · REVISION MAT 1

Listing and the product rule

1 Soup–Pizza, Soup–Curry, Soup–Pasta
Melon–Pizza, Melon–Curry, Melon–Pasta

6 combinations

2 **35, 38, 53, 58, 83, 85**

(6 numbers)

3 Each of the 4 sandwiches can go with each of the 3 drinks.

4 × 3 = **12** meal deals, not 7

4 4 × 3 × 2 × 1 = 24 ✓

4 choices for the first letter, then 3, then 2, then 1.

5 (a) 10 × 10 × 10 = **1,000**

(b) 5 × 10 × 10 = **500**

6 Ava & Ben, Ava & Cal, Ava & Dee, Ava & Eli, Ben & Cal, Ben & Dee, Ben & Eli, Cal & Dee, Cal & Eli, Dee & Eli

10 pairs