GCSE FOUNDATION · REVISION MAT 5

Listing and the product rule

1 A café offers a filling and a bread.

Fillings: Cheese, Ham
Breads: White, Brown, Seeded

List all the possible combinations.

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

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

List all the numbers that can be made.

3 A café sells 5 hats and 6 scarves.

A set is one of each.

Wes says there are 11 different sets.

Explain why Wes is wrong.

4 Show that the letters of the word CODE 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 not zero?

6 Two people are chosen from Vi, Wyn, Xi and Yan to be team captains.

List all the possible pairs.

How many pairs are there?

Mr&Mrs MATHS

ANSWERS · REVISION MAT 5

Listing and the product rule

1 Cheese–White, Cheese–Brown, Cheese–Seeded
Ham–White, Ham–Brown, Ham–Seeded

6 combinations

2 **23, 28, 32, 38, 82, 83**

(6 numbers)

3 Each of the 5 hats can go with each of the 6 scarves.

5 × 6 = **30** sets, not 11

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) 9 × 10 × 10 = **900**

6 Vi & Wyn, Vi & Xi, Vi & Yan,
Wyn & Xi, Wyn & Yan, Xi & Yan

6 pairs

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