GCSE HIGHER · REVISION MAT 5

Counting strategies

1 List all the possible pairs from Ann, Ben, Cal and Dee.

2 How many 4-digit codes can be made from the digits 1 to 6?

Digits may repeat.

3 Use 3 hats and 2 scarves to explain the product rule.

4 A quiz has 10 true/false questions.

How many different sets of answers are possible?

5 Show that there are 90 ways to choose a chair and a secretary from 10 people.

6 A number plate has 2 letters, 2 digits, then 3 letters.

How many plates are possible?

Give your answer in standard form to 2 s.f.

7 Show that 648 three-digit numbers have all different digits.

8 A pizza can have any number of 5 toppings, including none.

How many different pizzas are possible?

Mr&Mrs MATHS

ANSWERS · REVISION MAT 5

Counting strategies

1 **AB, AC, AD, BC, BD, CD: 6 pairs**

2 6^4

1296

3 Each hat can go with 2 scarves.

3 × 2 = 6 combinations

4 2^{10}

1024

5 10×9

= 90

6 $26^5 \times 10^2$

1.2×10^9

7 $9 \times 9 \times 8$

= 648

8 Each topping: on or off

$2^5 = 32$

Mr&Mrs MATHS