**Combining Probabilities**

At a café, children can choose from either fish fingers, chicken nuggets or pizza for their main course, and ice cream, fruit or jelly for their dessert. List all the possible combinations of meals. What is the probability that a child chooses chicken nuggets followed by jelly?

A door code is made up of three digits. The first digit can be 1, 2 or 3. The second digit can be 4, 5 or 6, and the third digit can be 7, 8 or 9. List all the possible door codes. What is the probability that the door code is an even number?

Lucy has two four-sided fair spinners, each number 1 to 4. She spins both spinners, the add their scores together. Complete the sample space.

(a) What is the probability of the total being a multiple of 3?

(b) What is the probability of the total being greater than 5?

(a) The probability of passing a music exam is 0.7. If Yanis and Marie both sit the exam, what is the probability that they both pass?

(b) The probability of Bruce winning a game of chess is 0.8. What is the probability that he wins three games in a row?

(a) The probability of it raining on any given day is 0.3. What is the probability that it rains on Monday, but doesn’t rain on either Tuesday or Wednesday?

(b) Calculate the probability of rolling 4 sixes in a row with a fair dice.

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