The product rule for counting *lesson handout*

Turn and talk

Every 2 digit number from the digits 1, 2 and 3.
Digits can repeat.

We do

A badge is one colour (A to D) and one shape (1 or 2).
How many badges are there?

	1	2
A	A1	A2
B		
C		
D		

4 × ☐ = ☐

You do

A sandwich is one of 3 breads and one of 5 fillings.
How many different sandwiches are there?

☐ × ☐ = ☐

You do

A code is one letter from A to E, then one digit from 0 to 9.
How many codes are there?

☐ × ☐ = ☐

We do

A lock has 3 dials. Each dial shows a number from 1 to 6.
How many settings are there?

6 × ☐ × ☐ = ☐

You do

A code is two letters from A to E, then one digit from 0 to 9.
Letters can repeat. How many codes are there?

☐ × ☐ × ☐ = ☐

You do

A PIN is 4 digits, each from 0 to 9. Digits can repeat.
How many PINs are there?

☐ × ☐ × ☐ × ☐ = ☐

We do

A captain and a vice captain are picked from 9 players.
In how many ways can they be picked?

9 × ☐ = ☐

You do

A 3 digit code uses the digits 1 to 6. No digit is used twice.
How many codes are there?

☐ × ☐ × ☐ = ☐

You do

Gold, silver and bronze medals go to 3 of 7 runners.
In how many ways can the medals be given?

☐ × ☐ × ☐ = ☐