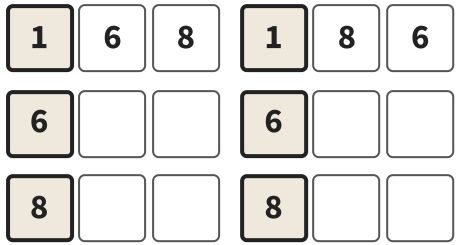
Systematic listing and counting

1

Three cards show 1, 6 and 8. List all the 3 digit numbers you can make using each card once.

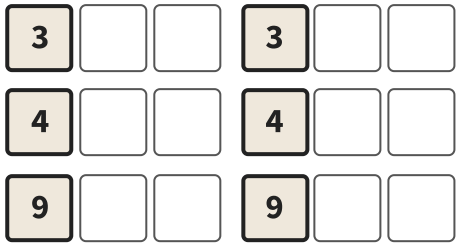


Fix the first one. Change the rest in order.

How many? _____

2

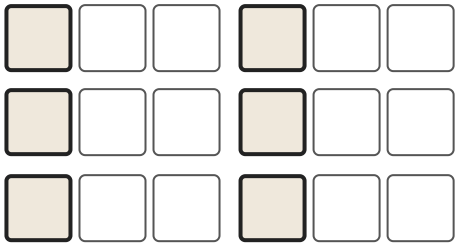
Three cards show 3, 4 and 9. List all the 3 digit numbers you can make using each card once.



How many? _____

3

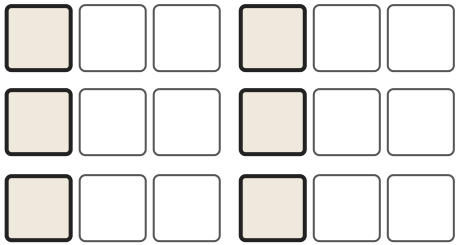
Mo puts three books on a shelf in a row: maths (M), art (R) and history (H). List all the orders he could put them in.



How many? _____

4

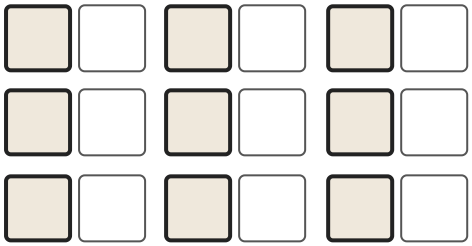
Three cards show 2, 5 and 6. List all the 3 digit numbers you can make using each card once.



How many? _____

5

A sandwich is one bread and one filling.
Breads: white (W), brown (B), seeded (S).
Fillings: cheese (C), egg (E), ham (H).
List all the sandwiches.



How many? _____

Product rule _____

6

A smoothie is made from two different fruits. Ali chooses from apple (A), banana (B), kiwi (K) and mango (M).
List all the smoothies he could make.

How many? _____

7

A breakfast is one kind of toast and one drink. There are 4 kinds of toast and 6 drinks. How many different breakfasts are there?

Answer _____

8

Wren lists the 3 digit numbers she can make using each of the cards 1, 5 and 9 once.

159 591 915 195 519 591

Explain what she has done wrong.

Repeated _____

Missed _____

Systematic listing and counting *further practice*

9

A pizza has two different toppings from ham (H), mushroom (M), olive (O), pepper (P) and sweetcorn (S). List all the pizzas.

How many? _____

10

An ice cream is one flavour, one sauce and one topping. There are 6 flavours, 2 sauces and 4 toppings. How many different ice creams are there?

Answer _____

11

Three cards show 3, 5 and 6. List all the odd 3 digit numbers you can make using each card once.

How many? _____

12

A meal deal is one sandwich and one drink. A shop sells 4 drinks. There are 28 different meal deals. How many sandwiches does the shop sell?

Answer _____

13

Five cards show 1, 4, 6, 8 and 9.
How many different 2 digit numbers can you make using two of the cards?

Answer _____

14

A bike lock code is two digits. Each digit is 1, 2 or 3, and a digit can be used twice.
List all the codes.

How many? _____

15

A meal is one starter and one main.
Café Lark has 4 starters and 6 mains.
Café Pine has 5 starters and 5 mains.
Which café can make more different meals?

Answer _____

16

Finn, Gail, Hope and Ivo pick a captain and a vice captain. Leah says there are 6 ways, the same as picking any 2 of the 4.
Is Leah right? Explain.

Answer _____