

Task 1: Maths investigation - working systematically

(link to some guidance on what to do with this problem if you're not too sure how to approach it: <https://nrich.maths.org/7227>)

Investigation: Button up



My coat has three different buttons.

Sometimes, I do them up starting with the top button. Sometimes, I start somewhere else.

How many ways can you find to do up my coat?

How will you remember them?

Do you think there are any more? How do you know?

Suggestion: Try doing it with a coat or cardigan with buttons and number the buttons 1, 2 and 3. This will then help when recording your different orders.

On the next page there is a table to record your findings from the investigation.

What different order can you do your coat up in?

	1 st button	2 nd button	3 rd button
Order			
Order			
Order			
Order			
Order			
Order			

If you need more than these orders, use the spare lines and space under the table.