MULTIPLICATION TABLE FOR PERMUTATIONS OF 1, 2, 3

	ι	σ	σ^2	τ	$\sigma\tau$	$\sigma^2\tau$
ι						
σ						
σ^2						
τ						
$\sigma\tau$						
$\sigma^2\tau$						

Write all entries as one of the following forms,
ι if the permutation is ι,
σ^m for m=1 or m=2 if the permutation is one of σ or σ^2,
τ if the permutation is τ,
Write any other entry as $\sigma^m\tau^n$ in **this order**. For example **don't** write $\tau\sigma$, you will be able to write this as $\sigma^m\tau^n$ instead but you will need to find m and n.

A good place to start is to work out what $\tau\sigma$ is! Remember we work right to left, so $\tau\sigma$ means to do σ first, then τ.

QUESTIONS TO THINK ABOUT.

Are these tables symmetric? What does this tell us?
Do any rows/columns remain unchanged?
Can we always get do something to stay where we are?
Can we undo each symmetry (i.e. get back to where we started before we applied it)?