

A_4	()	(14)(23)	(13)(24)	(12)(34)	(123)	(142)	(243)	(134)	(132)	(124)	(234)	(143)
()	()	(14)(23)	(13)(24)	(12)(34)	(123)	(142)	(243)	(134)	(132)	(124)	(234)	(143)
(14)(23)	(14)(23)	()	(12)(34)	(13)(24)	(142)	(123)	(134)	(243)	(143)	(234)	(124)	(132)
(13)(24)	(13)(24)	(12)(34)	()	(14)(23)	(243)	(134)	(123)	(142)	(124)	(132)	(143)	(234)
(12)(34)	(12)(34)	(13)(24)	(14)(23)	()	(134)	(243)	(142)	(123)	(234)	(143)	(132)	(124)
(123)	(123)	(134)	(142)	(243)	(132)	(234)	(143)	(124)	()	(14)(23)	(13)(24)	(12)(34)
(142)	(142)	(243)	(123)	(134)	(143)	(124)	(132)	(234)	(14)(23)	()	(12)(34)	(13)(24)
(243)	(243)	(142)	(134)	(123)	(124)	(143)	(234)	(132)	(13)(24)	(12)(34)	()	(14)(23)
(134)	(134)	(123)	(243)	(142)	(234)	(132)	(124)	(143)	(12)(34)	(13)(24)	(14)(23)	()
(132)	(132)	(124)	(234)	(143)	()	(13)(24)	(12)(34)	(14)(23)	(123)	(134)	(142)	(243)
(124)	(124)	(132)	(143)	(234)	(13)(24)	()	(14)(23)	(12)(34)	(243)	(142)	(134)	(123)
(234)	(234)	(143)	(132)	(124)	(12)(34)	(14)(23)	()	(13)(24)	(134)	(123)	(243)	(142)
(143)	(143)	(234)	(124)	(132)	(14)(23)	(12)(34)	(13)(24)	()	(142)	(243)	(123)	(134)

Permutations are written in functional form, and so are evaluated from right to left, $(143) \circ (123) = \overleftarrow{(143)(123)} = (12)(34)$.

Using the table to find $a \circ b$ you use b in the left column and a in the top row to find their product.