

Reading Quiz §7 & 8

1. Give an example of:

(a) [1] a function that is onto, and

(b) [2] a function with a well defined inverse.

2. [2] Let $X = \{1, 2, 3, 4\}$. Recall the symmetric group of degree 4 is a group whose elements are one-to-one onto maps $f : X \rightarrow X$, under composition. Find:

$$\begin{pmatrix} 1 & 2 & 3 & 4 \\ 2 & 4 & 1 & 3 \end{pmatrix} \circ \begin{pmatrix} 1 & 2 & 3 & 4 \\ 3 & 2 & 4 & 1 \end{pmatrix}$$

or equivalently, find: $(1, 2, 4, 3) \circ (1, 3, 4)$.