

EXERCISES ON FUNCTIONS

1. Write out the function which inverts its argument in
 - a. in formula form
 - b. in intensional form, as a set
 - c. in lambda abstraction form
2. Compose this function with itself and show that the composition is the identity function.
3. Is square root a function? Explain.
4. Write arithmetic functions (using standard arithmetic operators), with functionality $\{0,1\} \times \{0,1\} \rightarrow \{0,1\}$ that can represent the boolean “and” and boolean “or” operation. E.g. $\text{and}(1,1) = 1$, $\text{and}(1,0) = 0$, $\text{or}(0,0) = 0$, $\text{or}(1,0) = 1$ etc.

[ANSWERS](#)