

## Exercises

E4.17 [280] Fix  $n \neq 0$  and  $h \in \mathbb{N}$ , write a recursive definition of *exponentiation*  $n^h$ . Then prove that  $n^{h+k} = n^n n^k$  and  $(n^h)^k = n^{(hk)}$ .

**Solution 1.** [2DG]