



7.  $f((x^n + y^n)^{1/n}) = f(x) + f(y)$ .

Solution:

$$f(x) = Cx^n,$$

where  $C$  is an arbitrary constant.

### Reference

**Aczél, J. and Dhombres, J.,** *Functional Equations in Several Variables*, Cambridge Univ. Press, Cambridge, 1989.