

Year: 2009

Vol.: 75

Fasc.: 1-2

**Title:** On a functional equation with a symmetric component

**Author(s):** Judita Dascăl

Let  $I \subset \mathbb{R}$  be a nonvoid open interval and  $r \neq 0, 1$ ,  $q \in (0, 1)$ , such that  $r \neq q$ ,  $r \neq \frac{1}{2}$  and  $q \neq \frac{1}{2}$ . In this paper we give all the functions  $f, g : I \rightarrow \mathbb{R}_+$  such that

$$f\left(\frac{x+y}{2}\right) [r(1-q)g(y) - (1-r)qg(x)] = \frac{r-q}{1-2q} [(1-q)f(x)g(y) - qf(y)g(x)]$$

for all  $x, y \in I$ .

**Address:**

Judita Dascăl  
Institute of Mathematics  
University of Debrecen  
H-4010 Debrecen, P.O. Box 12  
Hungary