Problem of the Week

Finishing date: 10/06/2017

Find all strictly decreasing functions \( f(x) \) from the positive real numbers to the positive real numbers such that, for any positive real \( x \) and \( y \), the following holds:

\[
f(xf(y)) = yf(x)
\]

Previous problem winners:

Stephen Skapek (first solution)

All the information about the Problem of the Week challenge can be found at: utdallas.edu/math/undergraduate/problem-of-the-week