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Title: General and alien solutions of a functional equation and of a functional inequality

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The purpose of the present paper is to solve (under some assumption on the domain) the equation

$$g(x+y) - g(x) - g(y) = xf(y) + yf(x).$$

After determining the general solutions, we will investigate the so-called alien solutions. Finally, we will discuss the real solutions of the following related functional inequality:

$$g(x+y) - g(x) - g(y) \geq xf(y) + yf(x).$$

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