to yield the iteration

$$v_{n+1} = \frac{1}{2}\left\{v_n + \frac{7}{v_n(v_n+1)}\right\},$$

which is a convergent iteration to the roots of (3) with $v_0 = 1$, $v_1 = 2{\cdot}25$, $v_2 = 1{\cdot}6036$, $v_3 = 1{\cdot}6401$, $v_4 = 1{\cdot}6284$, $v_5 = 1{\cdot}63195$, $v_6 = 1{\cdot}63084$, $v_7 = 1{\cdot}63118$ etc. It converges linearly quite clearly: $g'(\xi) \simeq 0{\cdot}31$.

In fact if $|dg(x)/dx| > 1$ for a region I such that $|x - \xi| < \epsilon$ for some sufficiently large $\epsilon > 0$ then

$$\left|\frac{d(g^{-1}(x))}{dx}\right| = \left|\frac{1}{dg/dx}\right| < 1 \qquad \text{for all} \qquad x \in I.$$

If conditions (i) and (ii) also hold then the iteration

$$u_{n+1} = g^{-1}(u_n)$$

will converge to a root of the equation

$$\xi = g^{-1}(\xi),$$

so that

$$\xi = g(\xi).$$

The alchemist's stone above is however considerably dulled by the fact that the inverse function is not always readily available.

Can the leopard change its spots?—yes if you turn it inside out!

REFERENCE

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CORRESPONDENCE

To the Editor, *The Mathematical Gazette*

Sir,

There is a rather odd misprint (never mind whose fault!) at the end of my review of *Vector and Tensor Analysis with Applications* by Borisenko and Tarapov (*Math. Gazette*, December 1969, Vol. LIII, p. 452); the symbol # has been substituted for $\wedge$. With your kind permission and encouragement I should like to use this opportunity to draw attention to a letter to the *Gazette* on the subject of vector notation by Hartree, Milne and Chapman. (October 1936, Vol. XX, pp. 272–5).

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