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**MR0137740 (25 #1189) 17.60 92.20****Reiersøl, Olav****Genetic algebras studied recursively and by means of differential operators.***Math. Scand.* **10** 1962 25–44

In a non-associative algebra  $A$ , define “powers”  $G(n)$  and  $H(n)$  by  $G(n+1) = G(n)G(n)$  and  $H(n+2) = H(n+1)H(n)$  ( $n = 0, 1, 2, \dots$ ). The author describes a genetic algebra  $A_k$  [I. M. H. Etherington, Proc. Roy. Soc. Edinburgh **59** (1939), 242–258; [MR0000597 \(1,99e\)](#)] in such a way that linear difference equations are readily deduced for  $G(n)$  and  $H(n)$  in  $A_k$ . He solves these equations for  $k = 1, 2$  and attains known results for  $G(n)$  ( $k = 1, 2, 3$ ) and new results for  $H(n)$  ( $k = 1, 2$ ). He asserts that under hypotheses valid in genetic applications,  $H(n)$  has a limit as  $n$  tends to infinity and hence  $A_k$  has an idempotent  $H(\infty)$ . {The reviewer was unable to follow the proof of this assertion for  $k > 2$  because of the lack of discussion of possible coincidence of roots.} *M. F. Smiley*

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