

G. F. C. Griss and his negationless intuitionistic mathematics

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two real numbers, defined by the number-generator $a = \{ a_n \}$ and $b = \{ b_n \}$ are part from each other ($a \# b$) if for some n , a_n and b_n are separated intervals. Of course the second definition must so be understood, that we can actually find the number n . [...] Griss defines [...] the relation of difference by that of apartness. But here a new difficulty arises. One of the main properties of the apartness relation is: if it is impossible that $a \# b$, then $a=b$. This contains again the negation and hence must be replaced by a positive property. Griss found out that the following can take place: if every real c that is apart from a is also apart from b , then $a = b$.

[en abrégé : $a = b$ ssi $\forall x, x \# a \Leftrightarrow x \# b$]