

ALGEBRAIC AND TOPOLOGICAL METHODS IN NON-CLASSICAL LOGICS III
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PROFINITE HEYTING ALGEBRAS

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For a Heyting algebra A , we show that the following conditions are equivalent:
(i) A is profinite; (ii) A is finitely approximable, complete, and completely join-prime generated; (iii) A is isomorphic to the Heyting algebra $\text{Up}(X)$ of upsets of an image-finite poset X . We also show that A is isomorphic to its profinite completion iff A is finitely approximable, complete, and the kernel of every finite homomorphic image of A is a principal filter of A .

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