A cancellative hoop is a commutative monoid endowed with an additional binary operation which satisfies four identities. Cancellative hoops can be seen from various points of view: firstly, they characterize the equational theory of the nonnegative reals with the usual addition and the truncated subtraction. Also, they are precisely the positive cones of lattice-ordered abelian groups and the algebraic semantics of the infinite-valued propositional logic based on the half-open real unit interval $[0, 1)$ with the ordinary multiplication and its residuum. In this paper the authors show that any strong unit in a finitely presented cancellative hoop $H$ naturally induces an automorphism-invariant positive normalized linear functional on $H$. Since $H$ is representable as a uniformly dense set of continuous functions on its maximal spectrum, such functionals amount to automorphism-invariant finite Borel measures on the spectrum. The second main result from the paper shows that the corresponding measures are always absolutely continuous with respect to each other and provides an explicit expression for the reciprocal density.

References

12. G. Ewald, Combinatorial convexity and algebraic geometry, Graduate Texts in


Note: This list reflects references listed in the original paper as accurately as possible with no attempt to correct errors.

© Copyright American Mathematical Society 2018