

- ▶ MICHAEL BEESON, *On the notion of equal figures in Euclid.*

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Euclid uses an undefined notion of “equal figures”, to which he applies the common notions about equals added to equals or subtracted from equals. When we formalized Euclid Book I for computer proof-checking, we had to add fifteen axioms about undefined relations “equal triangles” and “equal quadrilaterals” to replace Euclid’s use of the common notions. In this paper, we offer definitions of “equal triangles” and “equal quadrilaterals, that Euclid could have given, and prove that they have the required properties, by proofs Euclid could have given. This removes the need for adding new axioms.