

# *A priori* and *a posteriori* in mathematics

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The following web of claims expresses a believable view of mathematical epistemology: ‘ Mathematics is an *a priori* science, in which proofs play a central role. This is largely because thinking through an argument warrants high confidence in its conclusion only if the argument is a proof. If, in thinking through an argument, visual experience helps us not merely to grasp the argument, but also to accept it, the argument is not purely *a priori* but contains an *a posteriori* element, and for that reason is not a proof.’

I will cast doubt on all of this, apart from the claim that proofs play a central role, in order to make way for a more nuanced (and more interesting) epistemology of mathematics.