

Levels of Mathematical Work in Technical Sciences

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We feel that a detailed classification of mathematical work is required to understand at which level mathematical proofs should be constructed to foster science, and to bring structural mathematics into engineering use. This poster is a continuum to our other presentation and concentrates on elaborating some details presented therein. We scrutinize the relation between engineering mathematics, applied mathematics and structural mathematics. The outcome demonstrates the background of the finite element method, a working flow that should be behind any computational method, and reveals explicitly what kind of mathematical proofs we think are generally useful in science and what are particularly useful in some application.