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Ravi Vakil* (rvakil@stanford.edu). *Learning through problem-solving from high school through postgraduate.*

"Problem-solving" has been central to learning and investigation in mathematics throughout human history, and it is striking how much consensus there is within the mathematical community on this. This has been elucidated in many ways, including through math circles, Polya's teachings (including his volumes with Szego), and inquiry-based learning. I will discuss some common themes and some attempts to stretch the envelope, with examples from high school (including "Proof School" in the San Francisco Bay Area) through advanced graduate "courses". (Received September 01, 2020)