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Alvin Kim* (alvin.kim@live.com), 22529 Kent Ave, Torrance, CA 90505. *Considerations on problems with infinitely many solutions.*

A majority of the problems in the math community involves solving for all the solutions that satisfy a certain set of conditions. On the contrary, finding only some of the solutions can also be useful, especially for proving for infinitely many solutions. One of the most famous examples is Euclid's proof, showing the existence of infinitely many prime numbers. Looking through problems in the *Gazeta Matematica*, I have collected a group of problems involving proof for infinitely many solutions, and have categorized them into two main groups: proofs by general solutions and proofs by induction. Further, I have come up with my own problems to add on to each of the two categories. (Received August 27, 2017)