

Abstract

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July 15, 2008

The topic of covering systems of congruences is a rich area of number theory that few mathematicians are aware of. Conceived by Paul Erdős in the early 50's, covering systems of congruences have been used to answer many difficult questions in number theory and the broader realm of mathematics in general. This research looks at the origins of covering systems, important results regarding them, applications which they are used for, open questions concerning them, and provide two new theorems which solve a problem that has been around since the inception of covering systems.