Isaac Armando Reiter* (ireit426@live.kutztown.edu), PA, and Ju Zhou. What You Have Leftover is Perfect: Enumerating the PSR Divisors.

There are certain positive integers that, when divided into any perfect square, always yield a remainder that is a perfect square. For example, when 12 is divided into a perfect square, the remainder is 0, 1, 4, or 9. We will refer to these numbers as PSR divisors. In this talk, the presenter will first demonstrate how to prove that a number is a PSR divisor. Then, he will show that there are only eight PSR divisors among the positive integers. (Received February 13, 2021)