The ARCS Seminar

Properties in $A + B$ Rings

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Abstract: When studying commutative unital rings that need not be integral domains, it becomes important to investigate zero divisors. This leads naturally to studying annihilators and certain properties that rings may or may not possess that relate to annihilators and zero divisors. Such properties are sometimes collectively called *annihilator conditions*; indeed, one of the properties is called the *annihilator condition*. Two of these annihilator conditions tend to be studied frequently. Since the properties are quite similar, in order to establish their independence, there came a need for examples of rings which had one property but not the other.

One example of such rings became known as $A + B$ rings. They are constructed from a ring A and nonempty set of prime ideals of A. While it can be debated who first introduced these rings, Tom Lucas certainly made them more accessible and was also one of the first to refer to them as $A + B$ rings. Many authors have since expanded on the idea of $A + B$ rings to create other similarly constructed rings (sometimes still calling them $A + B$ rings).

We will discuss two of these constructions and describe how certain ring properties of these new rings relate to the properties of the base ring A and set of prime ideals of A. For this talk, we will focus on the property of *h-local*.

Time and Place: Wednesday, April 06 from 4:30–5:30PM (Mountain Time Zone) in ENGR 187

The Rings and Wings Seminar is an activity of ARCS.
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