

Re: Sheaves and the empty set

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On May 18, 2:15 pm, Jannick Asmus <jannick.n...@xxxxxx> wrote:

What if C is the category of rings with unity and ring homomorphisms preserving unity?

Then the terminal object of this category is nothing but the zero ring..

recall that the terminal object (–the– because terminal objects are unique up to isomorphism) is the object B , by which for all A in my category there is ONLY ONE morphism $A \rightarrow B$

the zero ring satisfies this. There's only one ring homomorphism $R \rightarrow \{0\}$ and that's the one that takes every x in R to 0 .. unity is preserved in this homomorphism, because zero and one/unity are the same in the zero ring (this only happens in the zero ring in the category of commutative unitary rings). Some mathematicians "try" to define rings in such a way that $0 \neq 1$ but this does more harm than good imo, since otherwise the commutative unitary rings won't be a complete category.. a terminal/initial object is sometimes very useful imo.

Sincerely,
Jose Capco

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