PROBLEM OF THE WEEK #7
(Fall 2017)

Some of the citizens of Transylvania are human; the others are vampires. The humans always try to tell the truth, and the vampires always try to lie. Unfortunately, some of the inhabitants are insane: when a claim is true, the insane citizens believe it to be false, and *vice versa*. The sane Transylvanians, on the other hand, are completely accurate: they always know which claims are true and which are false.

I was talking with Boris and Natasha, a married Transylvanian couple. [As you know, a human who marries a vampire always becomes a vampire.] "We are vampires," Boris said. "Yes, we are," agreed Natasha. "As far as sanity goes," said Boris, "we're also alike."

What can you deduce about Boris and Natasha?

[Please fully explain your answer.]

Solutions should be submitted to Cinda Furry, in Gardner Hall 435, by 4:00 P.M. on Wednesday, November 1, 2017.

Every week, the best solution submitted earns a $10 Platteville gift certificate; the top scorer each semester also wins a cash award. Good luck!

You can always see the Problem of the Week (and complete rules) online at:

http://uwpmath.weebly.com/