PROBLEM OF THE WEEK #7
(Spring 2023)

I like to go for a walk in the evening, but I don't like to take the same route every night. The streets in my neighborhood are laid out in rectangular city blocks, and every time I get to a corner, I head in one of the four possible directions at random (including, sometimes, back the way I came — but I never turn around in the middle of a block).

My friend's house is on the corner, two blocks north and four blocks east of the corner where I live. If I start at my house, what is the probability that I'll reach my friend's corner by the time I've walked eight blocks?

[Please fully explain your answer.]

Email solutions to `kwonmi@uwplatt.edu` by 2:00pm on Wednesday, March 15, 2023.

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/`