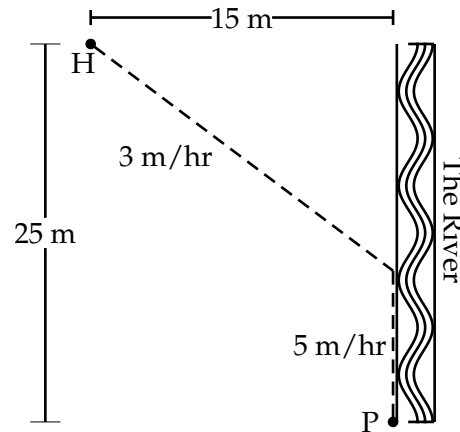


4. (16 points) The Awkward Turtle is going to a dinner party! Unfortunately, he's running quite late, so he wants to take the quickest route. The Awkward Turtle lives in a grassy plain (his home is labeled H in the figure below), where his walking speed is a slow but steady 3 meters per hour. The party is taking place southeast of his home, on the bank of a river (denoted by P in the figure). The river flows south at a constant rate of 5 meters per hour, and once he gets to the river, the Awkward Turtle can jump in and float the rest of the way to the party on his back. A typical path the Awkward Turtle might take from his house to the party is indicated in the figure below by a dashed line.

What is the shortest amount of time the entire trip (from home to dinner party) can take? [Recall that  $\text{rate} \times \text{time} = \text{distance}$ .]



Minimal time = \_\_\_\_\_