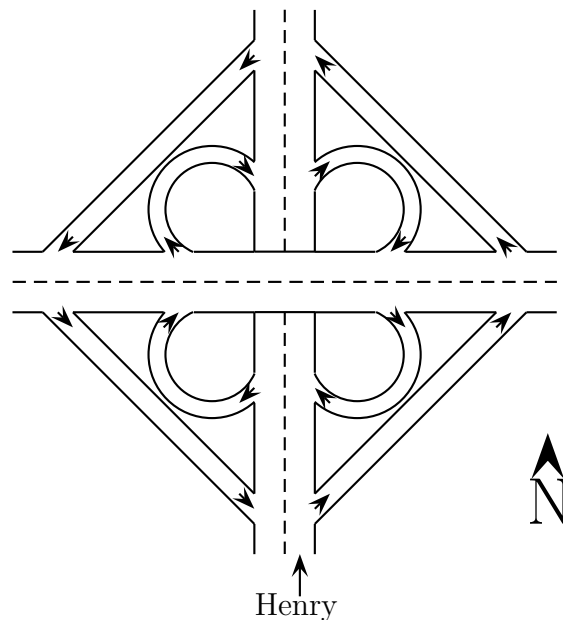


Cal Poly Department of Mathematics

Puzzle of the Week

November 6 - 12, 2009

Henry is driving north on Wall Street and wishes to take the high road and make a left onto Main Street. The intersection is engineered as a clover-leaf interchange – see the figure below. The problem is Henry is test-driving his newest invention: an auto-piloted car. Typical of Henry's inventions it is not working properly and instead of obeying his commands the car is randomly choosing whether to turn right onto any off-ramps. If at every opportunity Henry's car will exit right with probability $\frac{1}{3}$ and continue straight with probability $\frac{2}{3}$ what are Henry's chances of ending up heading west?



Solutions should be submitted to Morgan Sherman:

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before next Friday. Those with correct and complete solutions will have their names listed in next week's email announcement. Anybody is welcome to make a submission.