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Regulars

The taxi problem revisited



In this issue's article "[Image analysis – a modern application of mathematics](#)", Julian Stander introduced the idea of using Bayes' Theorem to update our beliefs based on new information.

We can use Bayes' Theorem to solve the taxi problem in Issue No. 2 (see "[The taxi problem](#)"):

A witness sees a crime involving a taxi in Carborough. The witness says that the taxi is blue. It is known from previous research that witnesses are correct 80% of the time when making such statements. The police also know that 85% of the taxis in Carborough are blue. What is the probability that a blue taxi was involved in the crime?

Solution



Plus is part of the family of activities in the Millennium Mathematics Project, which also includes the [NRICH](#) and [MOTIVATE](#) sites.