

Applying Problem-Solving Strategies

The Monty Hall Puzzle



Monty Hall was born in 1921 in Winnipeg, Manitoba. He hosted the popular television game show *Let's Make a Deal* from 1963 to 1976. (A new version of the show aired in 2009.) If you were a contestant on the show, Monty would show you three doors:

- One door concealed a joke prize, such as a beat-up car or a donkey.
- One door concealed a small prize, such as a new vacuum cleaner.
- One door concealed a grand prize, such as expensive jewellery, a luxury car, or a trip.

You would choose one door. Then Monty would open a door you had not chosen to reveal either the joke prize or the small prize. At this point, you could either stay with your original choice or switch to the other door. You would win the prize behind that door.

When Monty asked if you wanted to switch, should you stay with your original choice or switch?

Analyzing the Puzzle

- A. Predict whether switching your choice of door would affect your chance of winning the grand prize.
- B. Determine whether your prediction was correct, using a tree diagram or an experimental model. Provide your reasoning to support your representation.