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## L6 PROBLEM 3 (1/1 point)

Consider a similar problem to the Monty Hall problem:

In this problem, instead of 3 doors, 1 car, and 2 goats, instead there are 4 doors, 2 cars and 2 goats.

As in the Monty Hall problem, the player chooses a door, and then the host opens a door hiding a goat. With simulation or hand calculation, calculate the probability that switching into a door will lead you to a car. Enter your answer as a fraction or decimal in the following box:

3/4

 $\frac{3}{4}$ 

Answer: 3/4

## **EXPLANATION:**

75%.

There's 50/50 chance that the first door you chose will hide either a goat or a car. If the first choice hid a goat, then the door host opened for you reveals the one remaining goat, so if you switch you'll be getting a car for sure. If the first choice hid a car, then two remaining doors each hide a car and a goat, so there's 50% chance of getting a car by switching. Therefore there's overall 75% chance of getting a car by switching.

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