#### Monday, December 3, 2018 32+66-30

- •Warm-up
  - In 2010 the Tampa Bay Rays had a promotion at home games where each fan won a free taco if the team scored 7 or more runs. Here is a two-way table showing the relationship between tace status and the outcome of the games.
    - P(Taco and Win) =  $\frac{73}{81}$
    - P(Taco) =
    - P(Loss or No Taco) =  $\frac{68}{81}$
    - P(Taco | Win) =
- •The Monty Hall problem
  - If you know about this problem please DO NOT talk about it yet 🙂



# Objectives

 Content Objective: I will be able to explain the Monty Hall problem and the mathematics behind it. Social Objective: I will not "give away" a solution if I see it. Language Objective: I will explain in writing the reasoning behind the Monty Hall problem.

# The Monty Hall Problem

- Introduction
- Mythbusters Season 11 Episode 7 "Wheel of Mythfortune"
- Video #1
  - Write if you would switch or stay and explain why you would make that decision.
- Video #2
  - Summarize the experiment. Was it a valid experiment? Why or why not?
- Video #3
  - Summarize the argument. Do you agree? Why/why not?



Big ideas

### Simple probability

## Conditional probability

#### Law of large numbers







Pages 340 (33-36)