

Domain	Probability and Informed Decisions	
Cluster	Use probability to evaluate outcomes and make decisions.	
Standard(s)	M.ASHS.27	Justify a decision using probability rules (e.g., product testing, medical testing, weather forecasting, marketing, or sports/coaching decisions. Instructional Note: Extend and apply probability rules introduced in prior courses to more complex probability models that involve decisions. Include examples that yield both false positive and false negative results.

Content Examples

- » Simple Hypothesis Testing:
<https://youtu.be/5D1gV37bKXY>
- » Idea Behind Hypothesis Testing:
<https://youtu.be/dpGmVV0-4jc>
- » The Most Simple Introduction to Hypothesis Testing! - Statistics Help
<https://www.youtube.com/watch?v=UApFKiK4Hi8>

Relevant Content

Vocabulary

- » Simulation: A simulation is an imitation of a chance behavior, based on a model that accurately reflects the situation.
- » Hypothesis: A proposal or idea that is based on evidence, but we want to test it.

False Positives and False Negatives:

<https://www.mathsisfun.com/data/probability-false-negatives-positives.html>

Assessment Links or Tasks:

The Monty Hall Game Applet

To play the game, click on a door.

After the prize is revealed, click a second door and then decide whether to “stay” or “switch” doors.

<http://www.rossmanchance.com/applets/MontyHall/Monty04.html>