



Video

**MATHEMATICAL  
MODELING  
IN 3 ACTS**

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**Place Your Guess**

A coin toss is a popular way to decide between two options or settle a dispute. The coin toss is popular because it is a simple and unbiased way of deciding. Assuming the coin being tossed is a fair coin, both parties have an equally likely chance of winning.

What other methods could you use to decide between two choices fairly? Think about this during the Mathematical Modeling in 3 Acts lesson.

**ACT 1 Identify the Problem**

1. What is the first question that comes to mind after watching the video?
2. Write down the main question you will answer about what you saw in the video.
3. Make an initial conjecture that answers this main question.
4. Explain how you arrived at your conjecture.
5. What information will be useful to know to answer the main question?  
How can you get it? How will you use that information?

**ACT 2** Develop a Model

6. Use the math that you have learned in this Topic to refine your conjecture.

**ACT 3** Interpret the Results

7. Did your refined conjecture match the actual answer exactly? If not, what might explain the difference?

