THREE SHOTS
In a close basketball game, should you foul at the buzzer?

name

date

Act One: Win, Lose, or Draw

1 In the 2005 Conference USA basketball tournament, Memphis trailed Louisville by two points. At the buzzer, Memphis's Darius Washington attempted a 3-pointer; he missed but was fouled, and went to the line for three free throws. What are all the possible ways the shots could fall (e.g. make-miss-miss, etc.), and which outcome do you think is most likely: Washington wins the game, loses it, or sends it into overtime?

2 Darius Washington was a 72% free-throw shooter. Prior to watching each shot, calculate the probability that Washington wins the game in regulation, loses the game in regulation, or sends the game into overtime.

Louisville	Memphis	Shots Remain.	Probability Memphis Win	Probability Memphis Lose	Probability Overtime
75	73	🏀🏀🏀			
75		🏀🏀			
75		🏀			

3 Watch Washington's final shot. What happened, and do you think Louisville was smart to foul? Why or why not?

Act Two: No Foul, No Harm?

4 During the regular season, Darius Washington made 72% of his foul shots and made 40% of his 3-pointers. Let's return to the moment just before the buzzer. If you were the coach of Louisville, would you want your defense to foul Washington or let him take the 3-pointer? (If you foul, let's assume that Washington will miss the shot.)

🔴 Louisville	75	Ⓜ️ Memphis 73	TIME REMAINING 00:00:02

5 In general, basketball players are better at foul shots than 3-pointers; the average NBA player makes 75% of his foul shots and 35% of his 3-pointers, while the average WNBA player makes 80% and 34% of hers. If a defense is leading by two points at the end of the game, do you think it's better to foul or let the offense shoot for the win?