

Figure 2.13: Sample Probability Models

Michael, who has a 60 percent free throw average, is attempting two free throws. A free throw is worth one point. Is he most likely to score zero points, one point, or two points? Explain.

	Makes First Shot 60 percent	Misses First Shot 40 percent
Makes Second Shot 60 percent	36 percent	24 percent
Misses Second Shot 40 percent	24 percent	16 percent

$P(0 \text{ points}) = 16 \text{ percent}$

$P(1 \text{ point}) = 48 \text{ percent}$

$P(2 \text{ points}) = 36 \text{ percent}$

Sam tosses four coins. What are the possible outcomes? How likely is he to toss all heads or all tails?

Possible Outcomes

0	1	2	3	4
TTTT	HTTT	HHTT	HHHT	HHHH
	THTT	HTHT	HHTH	
	TTHT	HTTH	HTHH	
	TTTH	THHT	TTHH	
		THTH		
		TTHH		

16 possible outcomes

$P(\text{all heads or tails}) = \frac{2}{16} = \frac{1}{8}$