1 Probability Models

In your group, determine a probability model (i.e., the sample space and probabilities of outcomes) for each random experiment below.

1. Flipping a (fair) quarter

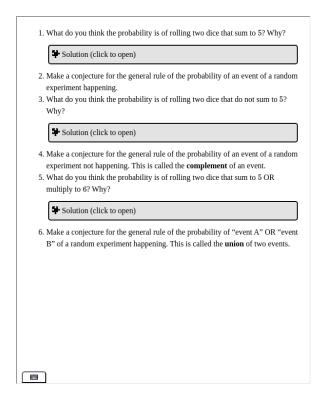
2. Flipping two (fair) quarters

3. Flipping a (weighted) quarter in which heads is twice as likely as tails

4. Rolling two (fair) dice

2 Basic Probability Rules

In your group, discuss the following questions related to the random experiment of rolling two (fair) six-sided dice.





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3 Using Probability Rules

We will now practice computing probabilites using the rules we've just established. Use the probability models provided to answer each question.

Global Mean	Probability (no	Global Mean	Probability
Temp. Change	policy)	Temp. Change	(with policy)
< 3° C	0.09	< 1.5° C	0.05
3 − 3.25° C	0.14	1.5 − 1.75° C	0.20
3.25 − 3.5° C	0.16	1.75 − 2° C	0.43
3.5 – 3.75° C	0.29	2 − 2.25° C	0.25
3.75 – 4° C > 4° C	0.20	> 2.25° C	0.07
b. What is the pr below 2° C w c. What is the pr 3° C OR abov d. What is the pr	ith policies in place obability that the gl ee 4° C with no police	obal mean temperati ?	ure change is be
Population Increase	next 3 years.	Probability 0.12	le nicrease ni
50 – 75		0.23	
75 – 100		0.36	
100 – 115		0.25	
> 115		0.04	
b. What is the pr thousand peop c. Suppose that a What is the pr people over th cities is indep d. Suppose that a What is the pr 50 thousand p in the two citi e. In the last two	ole over the next 3 yan eighboring city is obability that both of the next 3 years? Assendent. a neighboring city is obability that at lea eople over the next es is independent.	s modeled by the san cities increases less to ume that population s modeled by the san st one of the two citi 3 years? Assume tha me that population g	ne probability me han 50 thousand growth in the two probability me sincreases less at population growth in the two prowth in the two
or bad assump		our group to what e	лені шіѕ іѕ а дС



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