

Sample space diagrams

1. A blue and a red dice are thrown and the scores added together.



Red dice

		1	2	3	4	5	6
Blue dice	1	2	3				
	2						
	3						
	4						
	5						
	6						

(a) Complete the sample space diagram.

(b) What is the probability of scoring a 4?

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(c) What is the probability of scoring a 9?

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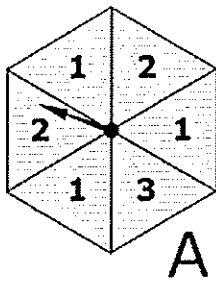
(d) What is the probability of scoring 10 or more?

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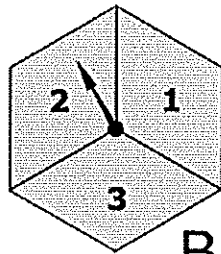
(e) What is the probability of scoring 5 or less?

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2. Two spinners A and B are spun and the scores are added together.



A



B

Spinner A

	+	1	2	1	3	1	2
Spinner B	1	2		2			
	2		4				
	3						

(a) Complete the sample space diagram.

(b) What is the probability of scoring a total of 2?

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(c) What is the probability of getting an even total?

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(d) What is the probability of getting a total that is a multiple of 3?

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3. Three cards are numbered 1, 3 and 4. Three disks are numbered 21, 4 and 5.



A game consists of picking one card at random and one disk at random. The number on the card is subtracted from the number on the disk.

(a) Complete the sample space diagram.

(b) What is the probability of scoring 1?

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(c) What is the probability of scoring 4 or more?

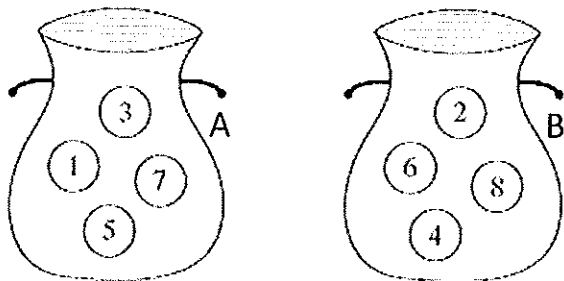
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(d) What is the probability of getting an even score?

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		disk		
		21	4	5
Card	1	20		
	3			
	4			

4. Two bags, A and B, each contain four numbered disks that are all the same size.



A disk is drawn at random from bag A and a disk is drawn at random from bag B. A score is obtained by multiplying the numbers on the two disks.

(a) Complete the sample space diagram.

(b) What is the probability of scoring less than 20?

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(c) What is the probability of scoring more than 18?

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		Bag A			
		1	3	5	7
Bag B	X				
	2	2	6		
	4				
	6				
8					