



1

*4 Sided Dice*

A pupil has two fair 4-sided die. Both are labelled 1 to 4.

The two dice are thrown and the total score is calculated.

- (a) Copy and complete the table below that shows ALL the possible totals

**1<sup>st</sup> Dice Score**

+	1	2	3	4
1	2	3	4	
<b>2<sup>nd</sup> Dice Score</b> 2				
3				
4				

- (b) What is the probability that you get a score of 3?
- (c) What is the probability that you get a score of 4 or more?
- (d) What is the probability that you get an even score?
- (e) What is the probability that you get a double

2

*Dice and Coin*

A fair dice is rolled and a fair coin is tossed.

- (a) Copy and complete the table below to show all the possible outcomes.

**Dice Score**

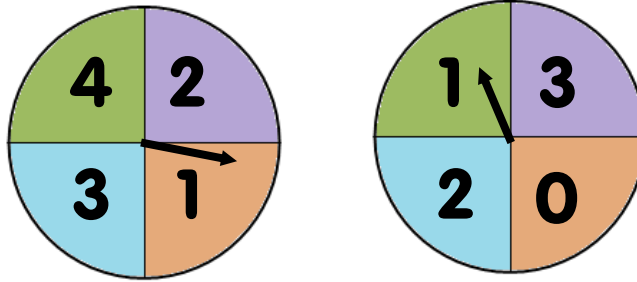
	1	2	3	4	5	6
<b>Coin</b> Heads (H)	1,H					
Tails (T)						

- (b) Find the probability of getting a head and an even number.

**3****Two Spinners**

These two fair spinners are spun at the same time.

The two numbers spun are added together.



- (a) Copy and complete the table to show all the possible totals.

**1<sup>st</sup> Spinner**

+	1	2	3	4
0	1	2	3	
1				
2				
3				

**2<sup>nd</sup> Spinner**

- (b) Find the probability that the total is 1  
 (c) Find the probability that the total is less than 4  
 (d) Find the probability that the total is more than or equal to 6.  
 (e) What is the most likely total?

**4****Two Dice**

Two fair six sided dice are thrown.

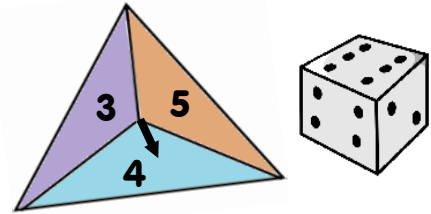
The scores on the dice are added together.

- (a) Draw a possibility space diagram to show all the possible total scores.  
 (b) Use the diagram to calculate the probability that the total score is  
 (i) 4  
 (ii) greater than 8  
 (iii) even

**5**

**Spinner and Dice**

A fair 3-sided spinner is labelled 3, 4 and 5.



The spinner is spun once and a fair six sided dice is rolled.

The number the spinner lands on and the dice score are added together.

(a) Complete the table to show all the possible scores.

		Dice Score					
+		1	2	3	4	5	6
Spinner Score	3	4	5	6			
	4						
	5						

(b) Find the probability that the score is a 5

(c) Find the probability that the score is not greater than 6

**6**

**Vending Machine**

In a cafe there is a vending machine that dispenses drinks.

The machine dispenses coffee (C), tea (T), orange (O) and water (W).

Georgia and Sarah each buy a drink from the machine.

(a) Copy and complete the table to show all the possible outcomes.

(b) Find the probability that they both buy the same item.

(c) Find the probability that at least one of them buys water.

		Georgia's Drink			
		C	T	O	W
Sarah's Drink	C	C,C	T,C		
	T				
	O				
	W				

**7**

**Card Problem**

Sunita has the following three cards numbered 2, 3 and 4.



Daniel has three cards numbered 4, 5 and 6.



Sunita picks a card at random and so does Daniel.

They multiply the number on their cards together to obtain a score.

(a) Copy and complete the table to show all the possible scores.

		<b>Sunita</b>		
	<b>x</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>Daniel</b>	<b>4</b>	<b>8</b>		
	<b>5</b>			
	<b>6</b>			

(b) Find the probability that the score is an even number.

(c) Find the probability that the score is greater and 15.

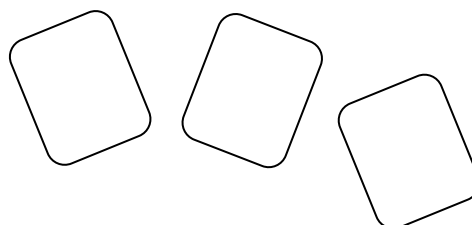
**8**

**Another Card Problem**

Kieran has 5 cards numbered 1 to 5.

Tasha has 5 cards numbered 2 to 6.

Kieran picks a card and so does Tasha.



They find the positive difference between the numbers on their cards.

Draw a diagram to show all the differences they can get and use it to work out the probability that they have a difference greater than 2.