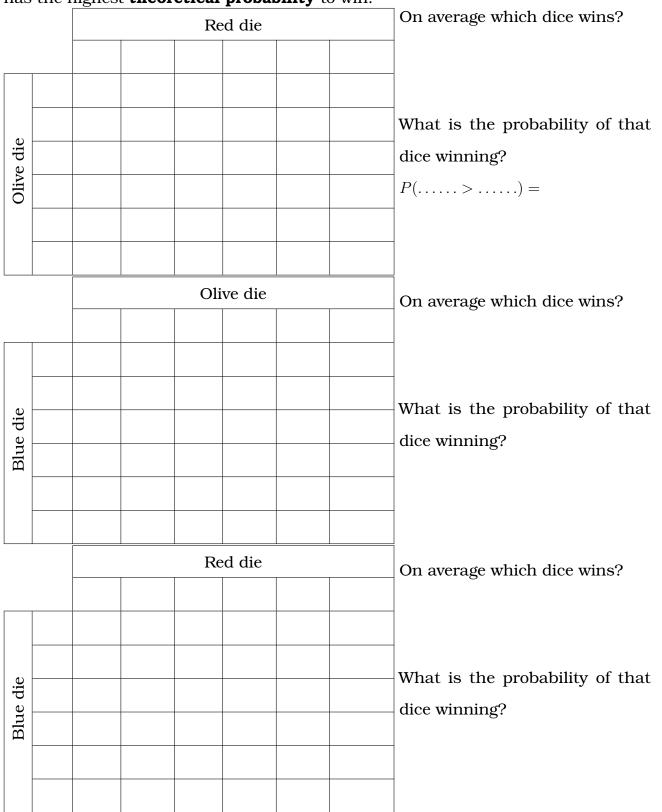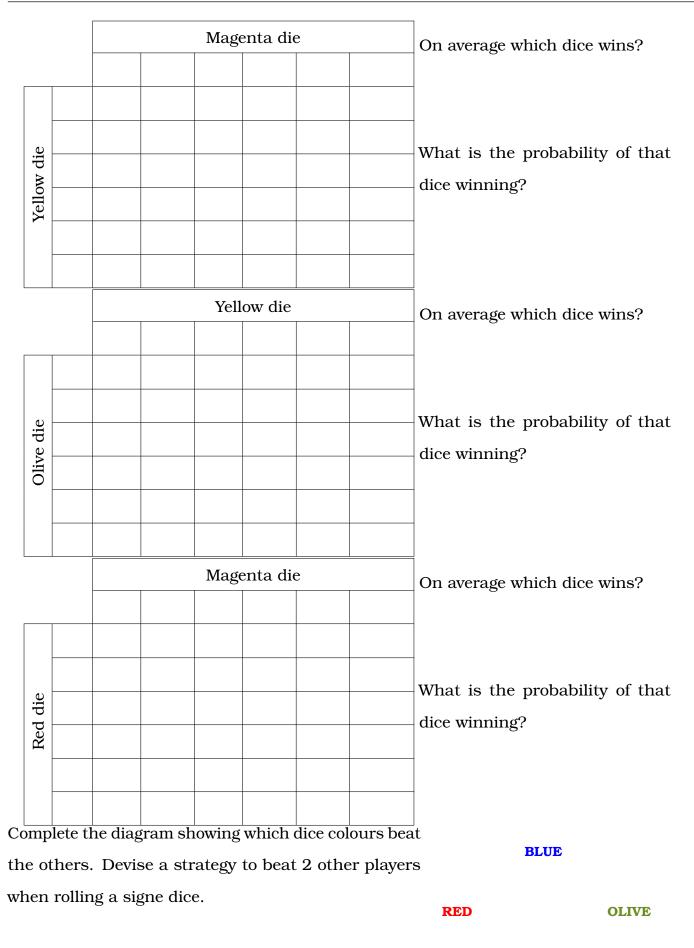## 3.9 Lesson 9 Sample space diagrams with single Grim dice

Consider a game in which two players roll a single Grim dice each. The player with the highest score wins. Use the sample space diagrams to determine which one of each pair of Grim dice has the highest **theoretical probability** to win.

	Red die					
Olive die						

On average which dice wins?

What is the probability of that dice winning?

$P(\ldots \ldots > \ldots \ldots) =$

	Olive die					
Blue die						

On average which dice wins?

What is the probability of that dice winning?

	Red die					
Blue die						

On average which dice wins?

What is the probability of that dice winning?

	Magenta die				
Yellow die					

On average which dice wins?

What is the probability of that dice winning?

	Yellow die				
Olive die					

On average which dice wins?

What is the probability of that dice winning?

	Magenta die				
Red die					

On average which dice wins?

What is the probability of that dice winning?

Complete the diagram showing which dice colours beat the others. Devise a strategy to beat 2 other players when rolling a signe dice.

BLUE

RED　　　　　　　　　　**OLIVE**

MAGENTA　　　**YELLOW**