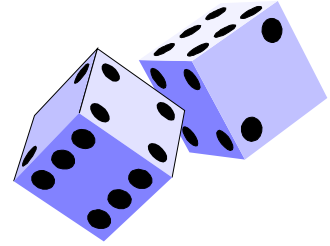


# Probability 3

Name(s):

## Equipment

You will need two dice (and possibly a calculator).



## Task

In many games you get a bonus for rolling a double. You are going to find the probability of this.

## Results

Roll the two dice 100 times. Record your results in the table.

<i>Double (1-1, 2-2, 3-3, 4-4, 5-5, 6-6)</i>	<i>Something else</i>
Tally:	Tally:
Total:	Total:

Fill in the gap to show the *relative frequency*:

$$P(\text{double}) = \frac{\text{number of doubles}}{\text{number of trials}} = \frac{\quad}{100} = \quad\%$$

## Sample Space Diagram

A *sample space diagram* shows all the possible outcomes.

Complete this sample space diagram:

		<i>First Dice</i>					
		1	2	3	4	5	6
<i>Second Dice</i>	1	1, 1					
	2			3, 2			
	3						
	4						
	5		2, 5				
	6						

Shade in all the doubles.

Fill in the gaps to find the *theoretical probability*:

$$P(\text{double}) = \frac{\text{number of doubles}}{\text{number of outcomes}} = \frac{\quad}{36}, \quad \quad \div 36 \times 100 = \quad\%$$

Did you get the same answer as the experiment? Why do you think this is?