



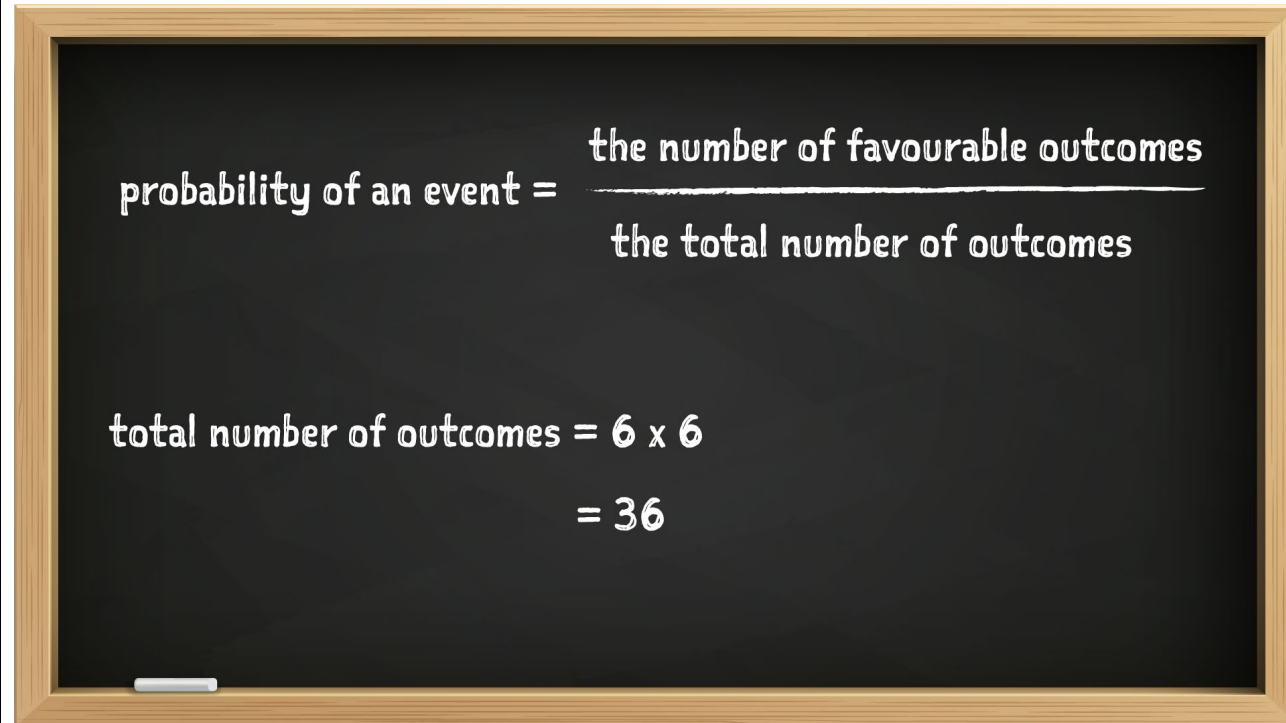
## Maths in Action: Solution to Problem 1

### Transcript

So, the probability of an event is the number of favourable outcomes divided by the total number of outcomes. Let's start by finding the total number of outcomes.

Each individual dice has six outcomes, so the total number of outcomes is six times six, which is thirty-six.

### Working


$$\text{probability of an event} = \frac{\text{the number of favourable outcomes}}{\text{the total number of outcomes}}$$
$$\begin{aligned}\text{total number of outcomes} &= 6 \times 6 \\ &= 36\end{aligned}$$



### Transcript

Now let's find the number of favourable outcomes. This is the number of outcomes which add up to seven. You can do this by creating a table like this, with all the outcomes: There are six outcomes with a sum of seven. So, the probability of rolling a sum of seven is six over 36, which is one in six.

### Working

total number of outcomes =  $6 \times 6$   
 $= 36$

number of favourable outcomes = 6

+	1	2	3	4	5	6
1	2	3	4	5	6	7
2	3	4	5	6	7	8
3	4	5	6	7	8	9
4	5	6	7	8	9	10
5	6	7	8	9	10	11
6	7	8	9	10	11	12

probability of rolling a sum of 7 =  $\frac{6}{36}$

=  $\frac{1}{6}$