Sample space diagrams

1

A fair coin is flipped and a fair spinner numbered 1 to 4 is spun. Complete the grid. Ring the cells for tails and an even number. Find the probability.

	1	2	3	4
H	H1	H2	H3	H4
T	T1			

Cells that match _____

Total cells _____

Answer _____

2

A fair spinner numbered 1 to 2 and a fair spinner numbered 1 to 5 are spun.
The scores are added. Find the probability that the total is 4.

+	1	2	3	4	5
1	2	3	4	5	6
2					

Cells that match _____

Total cells _____

Answer _____

3

A fair spinner numbered 1 to 3 is spun and a fair dice is rolled. The scores are added.
Find the probability that the total is 8.

+	1	2	3	4	5	6
1						
2						
3						

Answer _____

4

A fair spinner numbered 1 to 5 and a fair spinner numbered 1 to 4 are spun.
The scores are added. Find the probability that the total is 7.

+				

Answer _____

5

A fair spinner numbered 1 to 4 is spun and a fair dice is rolled. The scores are multiplied.
Find the probability that the score is 12.

×						

Answer _____

6

A fair coin is flipped and one of these cards is picked at random. List every possible outcome, for example HA.
Find the probability of heads and B.

A	B	C

Outcomes _____

Answer _____

7

Two fair dice are rolled and the scores are added. Find the probability that the total is less than 4.

+	1	2	3	4	5	6
1						
2						
3						
4						
5						
6						

Answer _____

8

Two fair spinners, each numbered 1 to 3, are spun and the scores are added.
Ravi says the totals are 2, 3, 4, 5 and 6, so P(total of 4) = $\frac{1}{5}$. Explain his mistake.
Then find P(total of 4).

+			

Mistake _____

Answer _____

Sample space diagrams *further practice*

9

Two fair spinners, each numbered 1 to 5, are spun. The scores are added.
Find the probability that the total is 6.

+					

Answer _____

10

In a board game, you need to roll a double to start: two fair dice showing the same number. Find the probability of rolling a double.

Answer _____

11

A fair spinner has three equal sections: red, blue and green. It is spun and a fair dice is rolled. Find the probability of blue and a number greater than 2.

Answer _____

12

Two fair spinners, each numbered 1 to 4, are spun and the scores are added.
Which total is the most likely?
Write down its probability.

+				

Total _____

Probability _____

13

At a school fair, players roll two fair dice and add the scores. A total of 11 or more wins a prize. 72 people play once each. How many would you expect to win a prize?

Answer _____

14

A fair coin is flipped and a fair spinner with equal sections numbered 1, 2, 3 and so on is spun. There are 10 possible outcomes.
(a) How many sections does the spinner have? (b) Find the probability of heads and 5.

(a) _____

(b) _____

15

Nina has 3 hats (red, grey and black) and 4 scarves (blue, white, green and yellow). She picks one hat and one scarf at random. (a) How many different outfits are there? (b) Find the probability of the red hat with the blue scarf.

(a) _____

(b) _____

16

A fair spinner numbered 1 to 3 and a fair spinner numbered 1 to 4 are spun.
The scores are added. Zara says an even total is more likely than an odd total.
Is she right? Show how you know.

+				

Answer _____