

Sample Space Diagrams

1

Two fair dice are rolled. The scores are added.
Find the probability that the total is 8.

+	1	2	3	4	5	6
1	2	3	4	5	6	7
2	3	4	5	6	7	8
3						
4						
5						
6						

Answer _____

2

Two fair dice are rolled. The scores are added.
Find the probability that the total is 10.

+	1	2	3	4	5	6
1	2	3	4	5	6	7
2						
3						
4						
5						
6						

Answer _____

3

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

+	1	2	3	4	5	6
1	2	3	4	5	6	7
2						
3						
4						

Answer _____

4

Two fair dice are rolled.
The scores are multiplied.
Find the probability that the product is 12.

×	1	2	3	4	5	6
1	1	2	3	4	5	6
2						
3						
4						
5						
6						

Answer _____

5

Two fair spinners, each numbered 1 to 5, are spun. The scores are subtracted, smaller from bigger.
Find the probability that the difference is 2.

-					

Answer _____

6

A fair spinner numbered 1 to 3 is spun and a fair dice is rolled. The scores are multiplied.
Find the probability that the product is even.

×						

Answer _____

7

Two fair dice are rolled. The scores are added.
Find the probability that the total is more than 9.

Answer _____

8

Two fair dice are rolled. The scores are subtracted, smaller from bigger.
Find the probability that the difference is 0.

Answer _____

Sample Space Diagrams *further practice*

9



A fair spinner numbered 1 to 5 and a fair spinner numbered 1 to 4 are spun. The scores are added. Complete the grid. Find the probability that the total is 6.

+	1	2	3	4
1				
2				
3				
4				
5				

Answer _____

10



A fair coin is flipped and a fair dice is rolled. List every outcome in the grid, for example H1. Find the probability of getting a head and an even number.

	1	2	3	4	5	6
H						
T						

Answer _____

11



Two fair dice are rolled and the scores are added. Find the probability that the total is 9 or more.

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

Answer _____

12



Two fair spinners are spun and the scores are added. Some of the scores are missing. Complete the grid. Find the probability that the total is 8.

+	2		5	
1	3	4		
	5			
5			10	12

Answer _____

13



In a board game you spin this fair spinner and roll a fair dice. The scores are multiplied. Find the probability that the score is 6.

×	1	2	3	4	5	6
1						
2						
2						
3						

Answer _____

14



Mo and Ella roll two fair dice and multiply the scores. Mo wins if the answer is odd. Ella wins if it is even. Is the game fair? Show how you know.

×	1	2	3	4	5	6
1						
2						
3						
4						
5						
6						

Answer _____

15



At a fair, a game is won when two fair dice show the same number. 180 people play the game once each. How many winners would you expect?

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

Answer _____

16



Two fair dice are rolled and the scores are added. Sam says there are 11 possible totals, 2 to 12, so the probability of a total of 7 is $\frac{1}{11}$. Explain why Sam is wrong.

Answer _____