

# Two dice game I

This task is about predicting, then recording, the outcome of a game of chance.

## Practical task

For **Game A** and **Game B** you are to:

- decide if each game is fair or not and explain your answer;
- play each game in pairs, but individually record and explain your results.

**Game A:** Throw two dice and add the top two numbers together.

- Player 1 wins when the result is an odd number.
- Player 2 wins when the result is an even number.



**Sum = 6**

a) i) Using the table below, who is more likely to win this game? (*Circle one*)

(A) Player 1      (B) Player 2      (C) Both players are equally likely.

ii) Explain your answer.

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Sum of two dice	2	3	4	5	6	7	8	9	10	11	12
Number of ways it can occur	1	2	3	4	5	6	5	4	3	2	1

**Game B:** Throw the two dice and multiply the top two numbers together.

- Player 1 wins when the result is an odd number.
- Player 2 wins when the result is an even number.



**Product = 8**

b) i) Who is more likely to win this game? (*Circle one*)

(A) Player 1      (B) Player 2      (C) Both players are equally likely.

ii) Explain your answer.

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- Pair up with someone else who has finished a) and b).
- Get two dice and complete parts c) and d).

c) i) Play Game A 50 times and record your results in the table below.

Tally		Frequency
Player 1 wins		
Player 2 wins		

ii) Do your results suggest that Game A is fair? **Yes** / **No** (*Circle one*)

Explain your answer.

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d) i) Play Game B 50 times and record your results in the table below.

Tally		Frequency
Player 1 wins		
Player 2 wins		

ii) Do your results suggest that Game B is fair? **Yes** / **No** (*Circle one*)

Explain your answer.

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