



AUSTRALIAN MATHS TRUST

AMC Challenge
Middle Primary: Years 3–4
Practice Problem

MP2: Party Games

A party game played with a six-sided dice is fair if the chance of winning is equal to the chance of losing each time the dice is rolled. Which one of these games is fair?

- (A) You win if you roll a 6.
- (B) You win if you roll a 2 or a 5.
- (C) You win if you roll a number greater than 4.
- (D) You win if you roll a number less than 3.
- (E) You win if you roll an odd number

MP2: Solutions

For each game there are 6 possible numbers you can roll and each is just as likely. So a game will be fair if there are 3 winning rolls and 3 losing rolls.

Game	(A)	(B)	(C)	(D)	(E)
Winning rolls	6	2,5	5,6	1,2	1,3,5
Losing rolls	1,2,3,4,5	1,3,4,6	1,2,3,4	3,4,5,6	2,4,6