

Year 2: Understand  $\frac{1}{2} + \frac{1}{2} = 1$ 

## 3 Pizza Challenge

## Aim of the Game

Roll the dice to build the pizzas. First to build 3 whole pizzas wins!

## Before you play

- Show a representation of one half and 2 halves like this:
- *What fractions are shown?* One half and two halves which is also one whole.
- *Can you write those fractions with digits?*  $\frac{1}{2}$  and  $\frac{2}{2}$  or 1.

They may not be used to seeing  $\frac{2}{2}$  (2 halves) and may not recognise it as the same as 1 whole.

- *What has happened to the numerator (top number) and what has happened to the denominator (bottom digit)?* The numerator has increased by 1 and the denominator has stayed the same.
- *What comes next in the pattern?*  $\frac{1}{2}, 1\frac{1}{2}, 2, 2\frac{1}{2}$ . They might not know you can go beyond  $\frac{2}{2}$ .
- If they struggle with these concepts, still play the game – it should help it click!



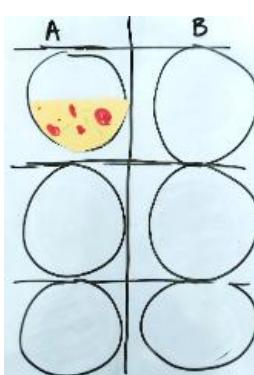
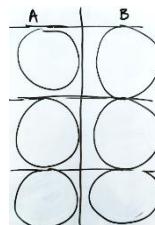
## You will need



## Play

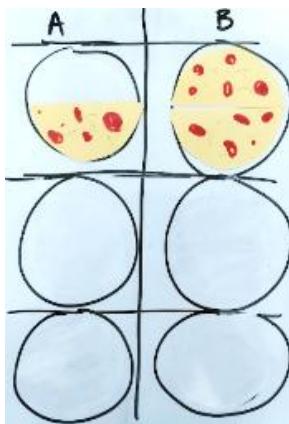
- Label the blank 6-sided dice with  $\frac{1}{2}, \frac{1}{2}, \frac{1}{2}, \frac{2}{2}, \frac{2}{2}, 1$ .
- Print and cut out or make your own set of 12 pizza halves.
- Draw out 2 columns and 3 'plates' in each column as shown on the whiteboard.

Below is an example of a few turns to show how mathematical language, thinking aloud and questioning could support understanding.



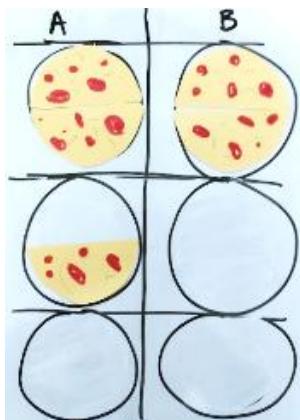
Player A rolls the die.

"I've rolled one half so I need to put half a pizza on my plate. I have half a pizza."



Player B rolls the die

B: "I've rolled a one. *How many half pizzas is equivalent to 1 whole pizza?* I will get 2 half pizzas that's the same as 1 pizza."



Player A's turn...

A: "I've rolled two halves so I need 2 half pizzas. 1 half completes the first plate and the other half goes on the next plate. I've got 1 and a half pizzas altogether. *How many more halves do I need to win?*"

Continue until a player builds 3 whole pizzas and wins!

### Reflect:

How many halves make 1 whole? What is 1 half plus one half?

How do you know when a fraction is equivalent to one whole?

### Adapt

Move on to counting in quarters, then thirds. Print out and cut up pizza fractions or make your own and change the labels on the die to  $\frac{1}{3}$ ,  $\frac{1}{3}$ ,  $\frac{1}{3}$ ,  $\frac{2}{3}$ ,  $\frac{3}{3}$  and 1 for the thirds version.  $\frac{1}{4}$ ,  $\frac{1}{4}$ ,  $\frac{2}{4}$ ,  $\frac{3}{4}$ ,  $\frac{4}{4}$  and 1 for the quarters version.

### Maths Talk

In this game, children apply their knowledge of fractions to count in halves. Thirds and quarters can be tackled next. Pictures are essential to build this understanding. Encourage children to recognise, represent fractions and spot patterns when counting. They should notice that the numerator increases, but the denominator stays the same. They should also become aware of examples of fractions that are equivalent to 1 whole.

### Language

Half

Whole

Fraction

Equivalent

*How many more?*

Numerator

Denominator

Increases

Stays the same

Altogether

