

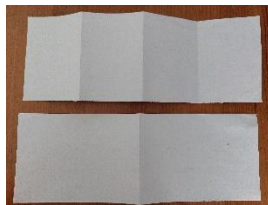
Year 2: Know 2 quarters = 1 quarter plus 1 quarter and see 1 half as 2 quarters

Halves and Quarters Race Track

Aim of the Game

Race to the end of the track using steps of halves, quarters and 2 quarters.

You will need



Before you play

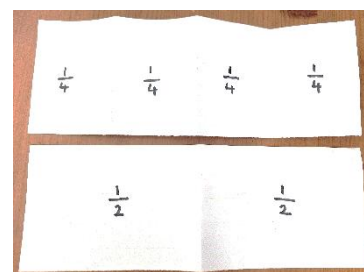
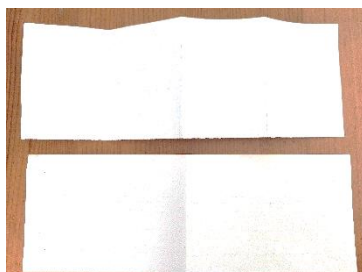
Check their understanding of halves and quarters.

- Take two identical strips of paper each so you can do the activity alongside them.
- Fold one of your strips into two equal pieces.
- Fold the other strip into four equal pieces.
- Compare one of the two equal pieces with two of the four equal pieces.



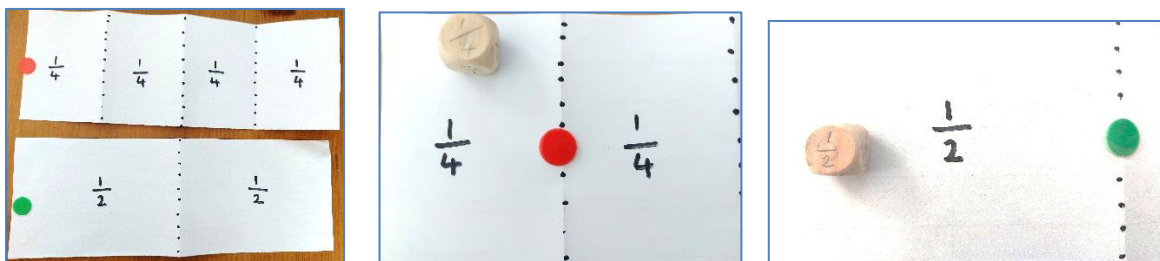
Image from White Rose Education

- What do you notice? (Can they see they are equal or equivalent?)
- Look at the strip with 2 equal parts. Establish we have folded one piece of paper in to halves – one whole split in to 2 equal parts.
- We can represent that using $\frac{1}{2}$ - as you write **1** say **1 part**, as you write **/** say **out of** and as you write **2** say **2 equal parts** - **which we call a half**. Label the halves on your strips.
- Now take the strip with 4 equal parts. Establish we have folded one piece of paper in to quarters – one whole split in to 4 equal parts.
- We can represent that using $\frac{1}{4}$ - as you write **1** say **1 part**, as you write **/** say **out of** and as you write **4** say **4 equal parts** - **which we call a quarter**. Label the quarters on your strips.



Play

- The strips you have made are now the race track for the game!
- You will race to the end of the track using steps of halves, quarters or 2 quarters as decided by the roll of a special dice with sides labelled $\frac{1}{4}$, $\frac{1}{4}$, $\frac{1}{2}$, $\frac{1}{2}$, $\frac{2}{4}$, $\frac{2}{4}$.
- Each player takes a coloured counter and 1 race track either labelled with halves or labelled with quarters.
- Take turns to roll the special dice and move your counter the fraction shown on your turn. This might mean you can't go!
- The winner is the first to the end of the strip.



- Establish through playing that to move $\frac{2}{4}$ is the same as $\frac{1}{4}$ plus $\frac{1}{4}$.
- Play a few times – do they notice $\frac{2}{4}$ is the same as $\frac{1}{2}$? If not...think out loud for them.
“You moved $\frac{2}{4}$ now you are half way to the end!”
“I moved 1 half, that’s the same as 2 of your quarters”.

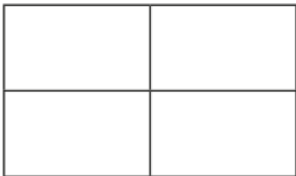
Adapt

- Try swapping race tracks – does it make a difference?
- Join 2 race tracks together to make a longer track. Both halves or quarters or try a mix!
- Discuss as it comes up if they’ve noticed $\frac{2}{4}$ is equivalent to $\frac{1}{2}$ can the player with the halves strip move $\frac{1}{2}$ if they roll $\frac{2}{4}$?

Problem Solving

If confident see if they solve problems like this like this from White Rose Education.

Ron wants to colour $\frac{1}{2}$ of the shape.




I cannot colour half because the shape has not been split into two parts.

Explain why Ron can colour $\frac{1}{2}$
Colour half of the shape.

Jo colours part of a shape.

I have coloured $\frac{1}{3}$ of my shape.



What mistake has Jo made?
What fraction has she coloured?