



Two Halves

Halving
Solving problems



Children enjoy finding things that are the same.

Adults could ask children to find half of lots of different things, quantities and collections.

The Activity

With a playdough cookie, pose a story problem about having to share it with a friend. How could you do this?

Cut or break it in two pieces and keep the bigger 'half' yourself. Ask the children what they think about this.

Present a range of materials, such as paper shapes, string and bananas. Challenge children to halve them and then discuss and display the results.

Encouraging mathematical thinking and reasoning:

Describing

What do your halves look like?

How did you make the halves?

Reasoning

How do you know they are halves?

How can you check they are the same size?

What can he do if gets the wrong number/not enough/he has too many?

Opening out

What if you have to halve a box of four cakes? A collection of pennies?

What if you have to halve a length of gold ribbon? A bottle of drink?

Is there another way to fold a square of paper in half?

Recording

Can you put something on paper to show:

- what your halves look like?
- how you know these are halves?

How do you write half?

The Mathematical Journey

Counting and cardinality

- using counting to check both amounts are the same

Matching numerals and amounts

- selecting numerals to match the numbers involved

Subtracting

- predicting the result of taking away one number from another
- using the inverse addition facts (e.g. "Half of 10 is 5, because 5 and 5 make 10")

Dividing

- understanding that dividing by two results in two equal parts - explaining this as 'same' or 'fair', or justifying by matching amounts

Measures

- awareness of aspects such as length, volume, weight, area
- comparing by estimating or directly, or using measuring tools such as identical containers or balance scales
- explaining how they know the halves are the same amount

Development and Variation

Finding halves of:

- 2D shapes (area) by drawing lines or folding paper
- 3D shapes (volumes) by cutting e.g. fruit and playdough
- lengths e.g. ribbons, strips of paper - folding and cutting
- weights e.g. playdough - checking with balance scales
- volumes e.g. water - pouring into two identical containers
- numbers, of items e.g. pennies, jewels, pegs on pegboards
- numbers, of structured materials e.g. Unifix sticks, Numicon, Cuisenaire



Make a display of halves.

Where does half go on the number line? Make an 'ages' line from birth to 20, for children and siblings, to include half years e.g. one and a half, four and a half ...

Use:

- tablets to halve pictures
- mirrors to halve (and double) pictures

Resources

- 2D shapes, folding paper
- ribbons
- playdough, knives, scales
- water, jugs, identical containers
- mirrors
- items e.g. pennies, jewels, pegs on pegboards
- structured materials eq Unifix sticks, Numicon, Cuisenaire



Acknowledgements: Claire Christie, Annabel Bennet

nrich.maths.org/early-years

© University of Cambridge