MATHS FIELD GUIDE · GRADE 1

A half is one of two equal parts

OPENING PROBLEM

How could you check the green part?



one half

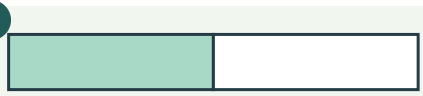
02 Decide what the whole is
03 Rules and worked cases
04 Fold a paper sandwich
05 Compare the models
06 Fold and share fairly
07 Check your reasoning

ILLUSTRATED PROBLEM SHEET

Decide what the whole is

A half is one of two equal shares of the same whole.

1

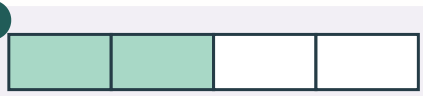


one half

How could you check the green part?

The unshaded part is the same size. The two parts remake the strip.

2

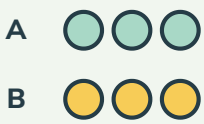


two quarters

Can a half have a line inside it?

Yes. Two of four equal pieces cover one half.

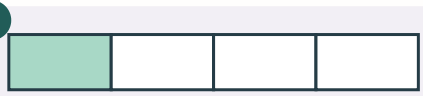
3



Half of six buttons goes into each box. How many in one box?

Three. Both shares are equal.

4



one quarter

Is one shaded piece always one half?

No. Here four equal pieces make the whole. One is a quarter.

Half of eight buttons
four buttons.

Two halves of eight buttons
all eight.

CHAPTER PROBLEM

How many halves remake one whole?

Two halves of that same whole.

MATHS REFERENCE · GRADE 1

A half is one of two equal parts

A half is one of two equal parts of a whole.

Two halves together remake that whole.

Cases to recognise

Situation	What to do and why
A square folded edge to opposite edge	The matching rectangles cover one another exactly. Each is half.
A square folded corner to opposite corner along a diagonal	The two matching triangles are halves too.

Read the model

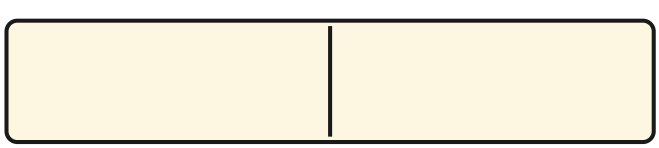
Split one whole

This rectangle is one whole. It is split into two equal-sized parts.

Each part is half of the rectangle.

Equal parts

The parts are the same size



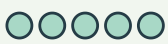
A whole split into parts

Check that parts match

Fold a paper rectangle so its two parts fit exactly on top of each other.

The fold shows two equal parts. Open it and see the whole again.

whole The complete object or amount.
half One of two equal parts of a whole.
equal parts Parts with the same size or amount.

A 

B 

What is the whole?

Start at five and count one more. Six.

WORKED INVESTIGATION

Fold a paper sandwich

Fold a rectangular paper so its short edges meet. Open it and see two matching pieces. Each covers the same amount of the original paper.

Look at this part	What it tells you
One whole	the starting paper
One half	one of two equal areas
Both halves	the whole paper again

Work it through

Fold another rectangle of the same size from corner to opposite corner. The halves now look like triangles, but each still covers half the paper.

Catch the mistake

A cut close to one edge also makes two pieces. Lay the small piece on the large one. The uncovered area shows they are unequal.

Compare the cases

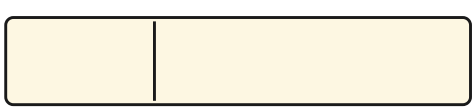
Two pieces are not always halves

This rectangle has two unequal parts.

Neither piece is half. The number of pieces is right, but their sizes do not match.

Equal parts

The parts are not the same size



A whole split into parts

Keep track of the whole

Half of a large sheet can be bigger than half of a small sheet.

Each is half of its own whole. Name the whole before comparing.

Change one condition

Compare half of a large sheet with half of a small sheet. Both are halves, yet the size of a half depends on the starting whole.

A ○○○○

B ○○

What changed from five and one?

One moved to the second row. There are still six.

A HALF IS ONE OF TWO EQUAL PARTS

Compare the models

Share one sandwich

An adult cuts one sandwich into two equal parts.

Each person gets half. Cutting two unequal pieces would not give equal halves.

Compare sharing and splitting

Sharing a group gives people some objects.

Splitting one whole into halves gives two equal parts of that one whole. We check equality in both cases.

Try a different fold

Fold a rectangle across its length, then try across its width on another copy.

Both folds can make halves when the two parts match.

Explain your reasoning

One paper has two pieces: one large, one small. Are they halves?

No. Halves must be equal parts.

Two more worked cases

Situation	Reasoning
A sheet torn into one large and one small piece	Two pieces alone do not make halves. Each needs equal area.
Half a small apple and half a large apple	Each is half of its own whole. The amounts can differ.

A ○○○
B ○○○

Can both parts match?

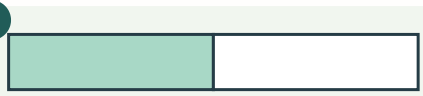
Yes. Three and three make six.

ILLUSTRATED PROBLEM SHEET

Fold and share fairly

Use equal shares of the same whole.

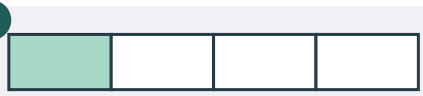
1



Where should a fold go for two equal pieces?

At the middle. One piece covers exactly the same length as the other.

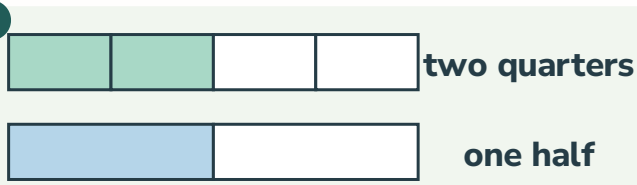
2



How many pieces exactly this size make the whole strip?

Four. Put them end to end without gaps.

3



Which shaded piece covers more?

They reach the same point. Two quarters make one half.

4



Share four counters equally between two people. What is half of four?

Two. Each person gets one of the two equal groups.

Four equal shares
a quarter each.

Four unequal pieces
the count alone cannot name each piece a quarter.

CHAPTER PROBLEM

Must half of a large sheet equal half of a small sheet in size?

No. They are halves of different wholes.

QUESTION BANK · FOLD OR COVER THE RIGHT COLUMN

Check your reasoning

Try the problem	Solution and reasoning
01 Two pieces look different in size. Can both be halves of one sheet?	They must have equal area. Two pieces alone do not prove equal shares.
02 A strip has a tiny piece and a large piece. Are they halves just because there are two?	No. Both pieces must be equal shares.
03 You have two pieces cut from one sheet. What must you check before calling them halves?	They must cover the whole sheet together without overlap, and each must have the same area.
04 One of two equal pieces is cut in half again. Are all three pieces halves?	No. The uncut piece is still half; the two new pieces are each smaller.
05 There are ten counters. How many make half the group?	Five counters in each of two equal groups make ten.
06 Which whole is used when we call the green piece one half? 	The whole rectangle includes both equal pieces. Two pieces the size of the green one cover it.

A ○○○○○○

B

Does an empty part change the total?

Six and zero still make six.

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