Same Size, Different Pieces

How 1/2 can equal 2/4



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Today we will...

WE ARE LEARNING TO

Show why a/b equals (n x a)/(n x b)

Spot and make equal fractions with pictures

SUCCESS LOOKS LIKE

- ✓ I can explain parts vs. size with a model
- ✓ I can make a match by multiplying top and bottom



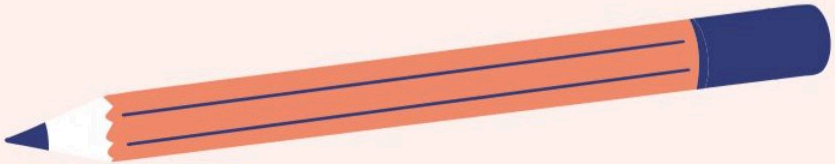
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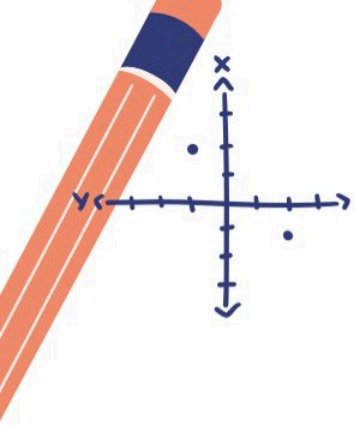
DID YOU KNOW?

One-half has endless other names!

2/4, 3/6, 4/8 all take the same space.



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Three picture helpers

Bars

Long strips show the same whole cut up.

Circles

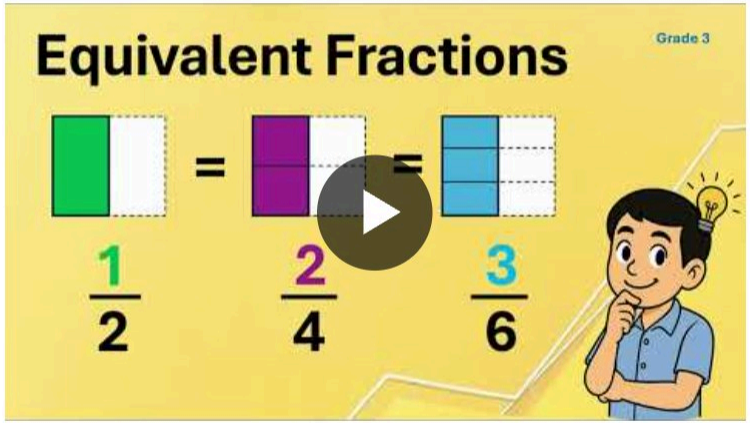
Round shapes split into equal slices.

Number line

Same spot means the same value.

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Watch: More pieces, smaller pieces



▶ 0:00 – 5:00

- Watch how cuts make pieces smaller
- Count how shaded pieces grow

Same amount, cut differently

1/2

- Whole cut into 2 parts
- 1 part shaded
- Pieces are big

2/4

- Whole cut into 4 parts
- 2 parts shaded
- Pieces are small

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Watch: Make your own matches



▶ 0:00 – 5:00

- Watch multiply top and bottom same
- Listen for how to spot matches

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Your task

Make matching strips to prove 2/3 equals 4/6.

1. Fold one same-size strip into 3 parts, shade 2.
2. Fold second strip into 6 parts, shade 4.
3. Line up shade, write 2/3 = 4/6 and explain.

15 min

In pairs



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Key words

equivalent

same value, looks different, like 1/2 = 2/4

numerator

top number that counts shaded parts

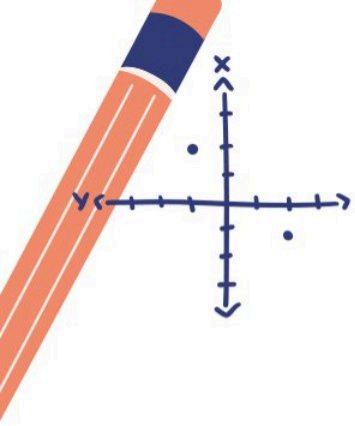
denominator

bottom number that counts all equal parts

visual model

picture like a bar that shows a fraction

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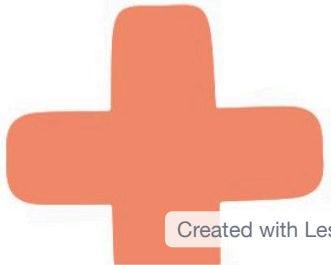


Which helper do you like?

Which picture best shows equivalents match?

A Long bars	B Circles	C Number line

Vote with your hands, then explain why.



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True or false?

1/2 = 2/4

Multiply top and bottom by 3 keeps value.

1/3 = 3/1

Changing only the top makes a match.



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