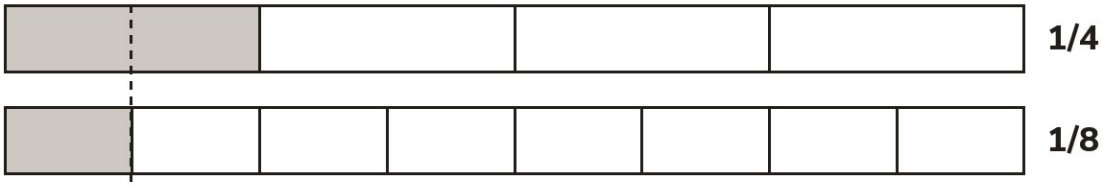
1/8 or 1/4? Help your child see the difference

For parents · Ages 9–10 · Goes with the "Understand the concept" video

A logical idea

Does your child say 1/8 is bigger than 1/4? They're using a rule that's true for whole numbers: 8 is more than 4. It isn't carelessness: they're looking for the logic.

The key idea



1/8 = half of 1/4

The bottom number tells you how many equal parts the whole is cut into. For the same whole, the more parts there are, the smaller each part is. One eighth is half of a quarter.

Two conditions, one limit

The same whole. Equal parts. But to compare two fractions, also look at how many parts you take: 3/8 is bigger than 1/4. What matters is the picture: how many parts, and how big each part is.

The activities

Page 2: the strips to fold. At snack time, ask: "If we share this cake equally among 4 of us, or among 8, when do you get the bigger slice?" Then write 1/4 and 1/8 together.

Questions instead of corrections

- "How could we check?"
- "How many equal parts did we cut it into?"
- "Is it the same whole?"

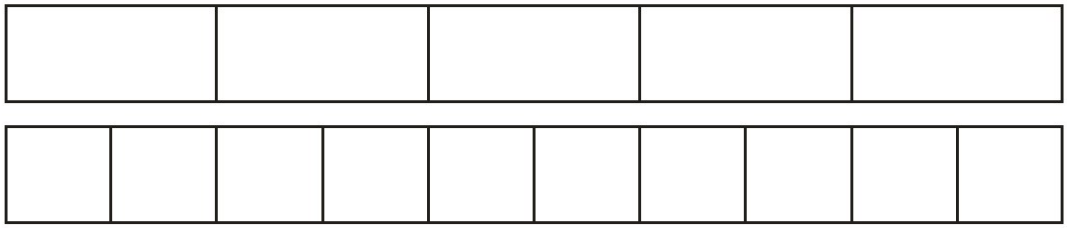
Then: "Tell me how you know."

To read after your child has checked

- 1/4 is bigger than 1/8: one eighth is half of a quarter.
- 3/8 is bigger than 1/4, because 1/4 = 2/8.
- 1/3 is bigger than 1/6.
- Later: 1/5 is bigger than 1/10.

A good sign: they talk about the size of the parts, not the number 8 or 10. If they're unsure, do the strips again with other fractions: it often takes several tries.

A few days later, without making a big deal of it (cut out)



Color one fifth and one tenth. Which one is bigger? Why?

1/8 or 1/4: which part is longer?



8 is more than 4. So 1/8 is bigger than 1/4.

Do you agree with Tom?

I predict

The longer part will be:

- ☐ 1/4 (one fourth, or one quarter)
- ☐ 1/8 (one eighth)
- ☐ the same

Why? _____

I fold

1. Cut out strips A and B.
2. Strip A: fold it in half, end to end. Without unfolding, fold it in half again.
3. Unfold it, count the parts, and trace the folds in pencil.
4. Strip B: fold it in half, end to end. Without unfolding, fold it in half again, then again.
5. Unfold it, count the parts, and trace the folds.
6. On each strip, color the part with the letter. Write 1/4 inside the colored part on A. Write 1/8 inside the colored part on B.

I check

Place B below A, letters on the left, left edges lined up.

The longer part is:

☐ 1/4 ☐ 1/8

My prediction:

☐ was right ☐ needs changing

Changed your prediction? Great: you checked!

I explain

Which part is shorter? Explain why to a grown-up.

What about 3/8?

On B, color the next 2 parts. You have colored 3/8. Compare this with 1/4 on A. Is it longer or shorter?

Family challenge (strips C and D)

Cut out C and D. 1/3 or 1/6? Predict first. Fold each into three equal parts, like a letter. Without unfolding D, fold it in half, end to end. Unfold both. Color one part on each. Compare.

Tip: bend the strip into an S. Adjust until all three parts match. Then press the folds flat.

A

B

C

D

Strips A, B, C, and D: same length. Print at 100%, single-sided.