Is 8 longer than 6? Helping your child ask "8 what?"

Parent page · ages 7–8 · goes with the video "Understand the concept"

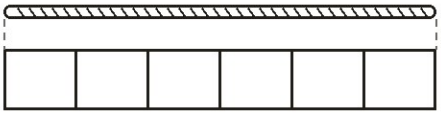
A logical idea

Does your child compare two measurements by their numbers? Since they were little, they've compared numbers of the same kind (8 marbles is more than 6), and that rule works. It isn't necessarily carelessness: they're using it where it no longer works.

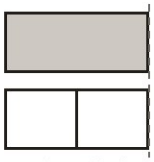
The key idea



Same rope: 3 long strips



Same rope: 6 short strips



1 long strip = 2 short strips

A measurement is a number and a unit. To measure, place a unit end to end, with no gaps and no overlaps, starting right at one end, then count. The same length has two measurements if the unit changes: the smaller the unit, the more of them you need. To compare two lengths you can't put side by side, measure both with the same thing.

Always true, and two details

With the same unit, the bigger number really is the longer length (not the shorter one). Details: all the units must be identical (an adult's hand isn't a child's hand); when you can set two lengths side by side, compare them directly.

Questions instead of corrections

- "Eight what?"
- "Is it the same unit for both?"
- "How could we check without trusting the numbers?"

Then: "Tell me how you know."

The activities

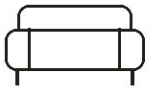
Page 2, plus: a table, a rug, sticky notes; 2 sheets of paper, string, painter's tape. Adult, beforehand: cut each sheet into 4 strips the long way (the width doesn't matter); keep 4 (the long ones), fold the other 4 in half and cut along the fold (8 short ones). Gap: 4 long strips end to end, ends marked with tape, then strips picked up. Rope: string as long as 3 long strips. Scissors for adults only; put the string away afterward, out of reach of toddlers. Give your child only page 2: keep this page out of sight while they work.

Read after your child has worked it out

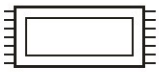
- Hands: for the same table, the child counts more hands than the adult, because their hand is smaller.
- The rug: with the table and the rug measured with the same hand, the bigger number shows the longer one.
- The strips: the gap is 4 long strips or 8 short ones; the rope is 3 long or 6 short.
- The trap: 6 short against 4 long, 6 is the bigger number, but the rope is too short.
- Challenge: changing units changes the numbers, not the comparison.
- Cut-out: there's no way to tell; an adult's steps are longer than a child's. You'd have to measure both with the same steps. "Your steps are bigger" or "we'd have to check" are great answers too.

A good sign: they ask "8 what?" or pick the same unit for both. If not, do an activity again with other objects: it often takes several tries.

A few days later, without warning (cut out)



An adult measured the couch: 3 of their steps

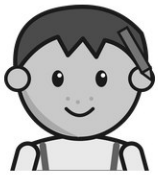


You measured the rug: 4 of your steps

Which is longer? How do you know?

My answer: _____

Is 8 longer than 6?



8 packages is more than 6 gloves: it's long enough!

Do you agree with Rafa?

1. I predict

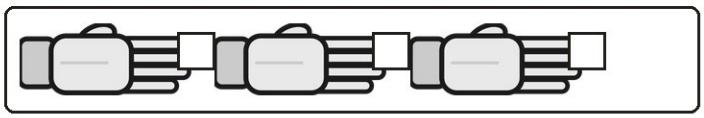
I measure the table with my hand. An adult measures it with theirs. Who will get the bigger number?

☐ me ☐ the adult ☐ the same

Why? _____

2. I measure the table

1. Lay your hand flat on the table, with your wrist right at the end.
2. Stick a small note at your fingertips.
3. Start again from that note: end to end, no gaps, no overlaps.
4. Count your hands. The adult does the same with their hand.



The table is _____ of my hands long.

The table is _____ of the adult's hands long.

3. I check

Hold your hand against the adult's, wrists lined up.

The bigger hand is:

☐ the adult's ☐ mine

My prediction:

☐ was right ☐ needs changing

Changed your prediction? Great: you checked it yourself.

4. What about the rug?

The adult measures the rug with their hand, like the table. Table: _____ hands. Rug: _____ hands.

The longer one is:

☐ the table ☐ the rug

How do you know? _____

5. The rope that was too short

The gap between the posts is marked on the floor. Measure the gap with the long strips, then the rope with the short ones.



Gap: _____ long strips. Rope: _____ short strips.

I think the rope is:

☐ long enough ☐ too short

Check: stretch the rope between the two marks. It is:

☐ long enough ☐ too short

Now measure the gap and the rope with the same strips, the short ones. Gap: _____ short.

Rope: _____ short.

6. I explain

Why can 6 short strips be shorter than 4 long ones? Explain why to an adult.

7. Family challenge

Compare two things in your home that can't be put side by side (the couch and a bed, for example). Pick a unit (a shoe, a book) and use the same one for both. Then switch units: is the longer one still the same? If there's a little left over, write "a little more than."

First length: _____

Second length: _____

The longer one is: _____