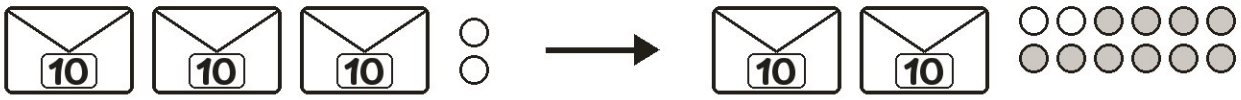
32 minus 5: helping your child open a ten

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

A logical idea

Does your child say "you can't do 2 minus 5, so I do 5 minus 2" and get 33 for 32 − 5? In the ones place, there's a 2 and they need to take away 5: they do what is possible. It isn't necessarily carelessness: they forget that 32 is also 3 tens, which hold objects. One clue: when you take away, you end up with fewer than you started with, and 33 is more than 32. It doesn't catch everything: for 44 − 7, the same mistake gives 43, also wrong (37).

The key idea



Before: 3 envelopes and 2 loose

After opening: 2 envelopes and 12 loose

Same total: 32 counters

32 is 3 envelopes of 10 counters and 2 loose counters. To take away 5, open an envelope: 2 envelopes and 12 loose counters, still 32 in all. Take 5 of the 12: 2 envelopes and 7 counters are left, which is 27. Check: 27 + 5 = 32.

Three things to watch

Opening an envelope doesn't change the total. You only need to open one if the loose counters aren't enough: for 34 − 3, there's no need (31). It isn't the only way: you can take away 2 to get to 30, then 3 more (32 − 2 = 30, then 30 − 3 = 27).

The activities

Four small paper envelopes (closed without sealing) and forty-five small identical objects (short pasta, big buttons), out of reach of toddlers. Give your child only page 2: keep this parent page out of sight while they work.

Questions instead of corrections

- "What's inside a closed envelope?"
- "And how many counters are there in all now?"
- "If we give some away, can there be more than before?"
- "How can we check?"

For the last one: put back the counters you gave; if you land on the starting number, the answer is right. Then: "Tell me how you know."

A few days later, out of the blue (cut out)

You have 43 cards. **You give away 6.**

How many do you have left? How do you know?

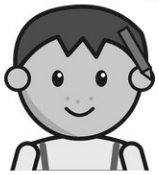
Number left: _____

Read after your child has worked it out

- 32 − 5: 3 envelopes and 2 loose; open an envelope: 2 envelopes and 12 loose (still 32); take away 5: 2 envelopes and 7 loose, which is 27. Check: 27 + 5 = 32.
- 34 − 3: the 4 loose counters are enough, no need to open: 3 envelopes and 1 loose, which is 31.
- 30 − 4: no loose counters, so open one: 2 envelopes and 10 loose, then 6 loose: 26.
- 41 − 3: only 1 loose counter, so open one: 3 envelopes and 11 loose, then 8 loose: 38.
- 25 − 8: 5 loose aren't enough, so open one: 1 envelope and 15 loose, then 7 loose: 17.
- Challenge (4 envelopes and 2 loose): taking away 1 or 2, no need to open; taking away 3 to 9, you have to open.
- Cut-out: 43 − 6: open a ten, 3 tens and 13 ones, then 7 ones: 37.

A good sign: they talk about opening a ten, loose counters, or a total that doesn't change, or they take away in steps (for example 3, then 3 more). If not, do it again with the envelopes and other numbers: it often takes several tries.

Taking 5 from 32: what do we do?



You can't do 2 minus 5... so 5 minus 2: 33 will be left!

Do you agree with Rafa?

1. I predict

32 counters: 3 envelopes of 10 and 2 loose counters. We take away 5.
There will be ..... counters left.
Can there be more than 32 left?
☐ yes ☐ no
Why? _____

2. I open an envelope

a. Make 3 envelopes of 10 counters (close them without sealing) and keep 2 loose counters.
b. No counters? In the "Before" grid, draw 3 bars of ten and 2 squares in pencil.
c. Copy them into the "After" grid. Leave "Before" as is.
d. There are only 2 loose counters: open an envelope. On the "After" grid, erase a bar and draw 10 squares.
e. Count: how many envelopes, how many loose counters, and how many in all?
f. Take away 5 loose counters (on the "After" grid, cross out 5 squares).
g. Put the 5 counters back: do you get 32 again?

3. I check

After taking away 5: ..... envelopes and ..... loose counters.
Total before opening: .....
Total after opening: .....
My prediction: ☐ was right ☐ needs changing

Changed your prediction? Great: you checked it yourself.

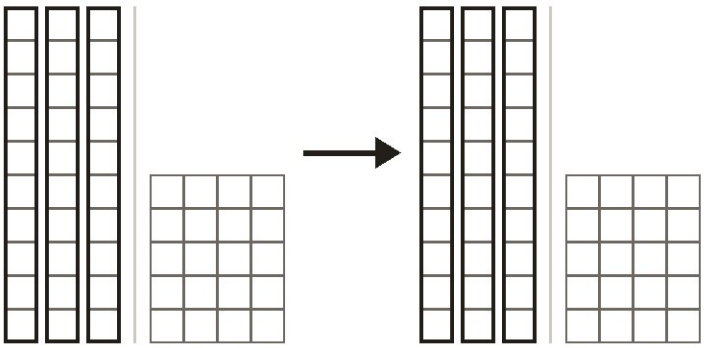
4. Open it or not?

Before touching the counters, say whether you need to open an envelope. Then check with the counters (or by drawing bars and squares on paper) and write what's left.

34 – 3 ☐ open ☐ don't open
30 – 4 ☐ open ☐ don't open
41 – 3 ☐ open ☐ don't open
25 – 8 ☐ open ☐ don't open

Left: ....

Before **After**



One bar = one envelope of 10 counters. One square = one loose counter.

5. I explain

Why is there still the same number of counters when you open an envelope? Explain it to an adult.

_____

_____

6. Family challenge

With 4 envelopes of 10 counters and 2 loose counters, find a number to take away (from 1 to 9) that means opening an envelope, and another one that doesn't.
I have to open: ..... No need to open: .....