Wondermaths

Making Sense of 100

A visual guide to tens, ones, and distance



For parents of children around ages 5-7.

Let Me Try · PWA3 · Book 2

Find an idea to show

A visible ten 3

Digits have different jobs 4

Zero records an empty place 5

Make the next ten 6

A ten more or less 7

Position and distance 8

Coins or cents? 9

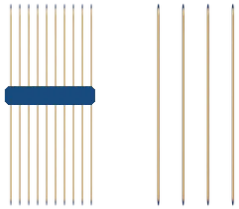
Fourteen pictured invitations 10

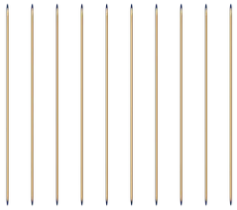
Help and the bigger picture 14

Sources 15

Make the number visible

14





Read it

Fourteen.

Build it

One ten and four ones.

Check it

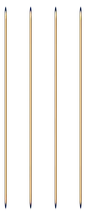
Open a ten whenever needed.

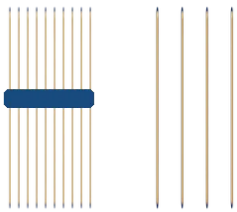


Objects, words, and writing offer different ways to show understanding.

The ten inside fourteen







10

One checked bundle.

4

Four loose straws.

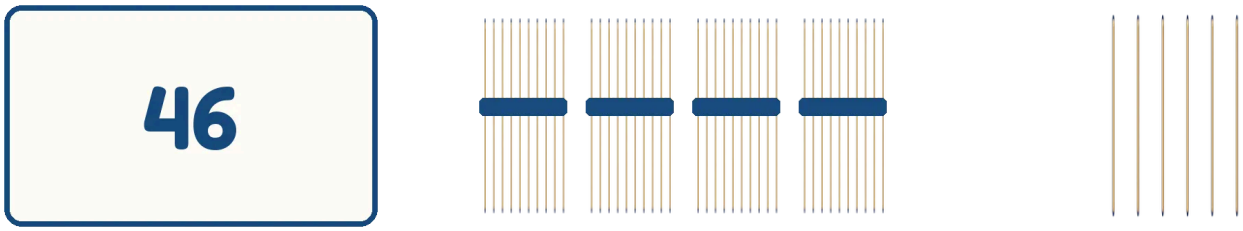
14

10 + 4 = 14.



“Show me the ten. Now show me the four ones.”

What does each digit do?



46

The label describes the collection.

4 tens

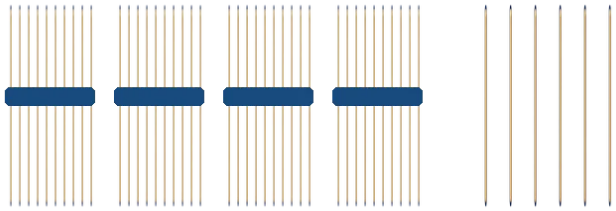
Four bundles hold forty straws.

6 ones

Six loose straws complete forty-six.

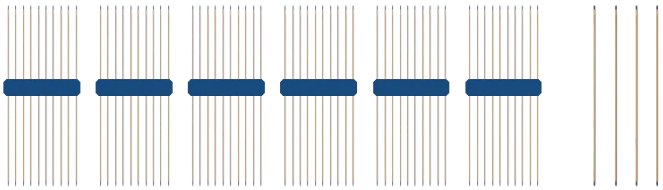
The 4 means forty in this number, not four single straws.

46 and 64 are different



46 = 40 + 6

Four tens. Six ones.



64 = 60 + 4

Six tens. Four ones.

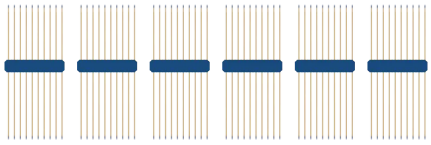
Same digits, different jobs. Build both before matching labels.

Six of what?



6 straws

Six single objects.



6 bundles

Each holds ten: sixty straws.

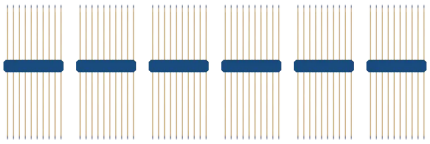
60

Six tens. No loose ones.



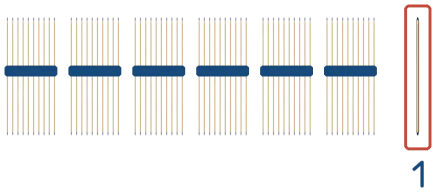
Name the unit: bundles or individual straws?

60 → 61 → 60



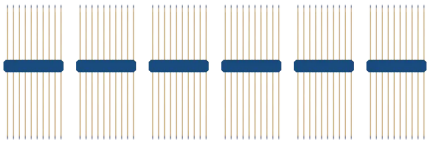
Sixty

No loose ones outside the bundles.



Add one

Now there is one loose straw.



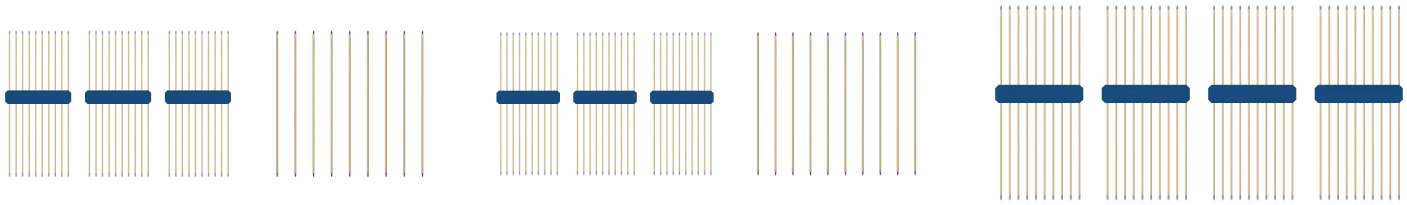
Take that one away

The six tens stay.



Adding changes the amount. Moving the label alone does not.

39 → 40: watch the change



Start with 39

Three tens and nine ones.

Add one

Three tens stay. Ten loose ones can make a bundle.

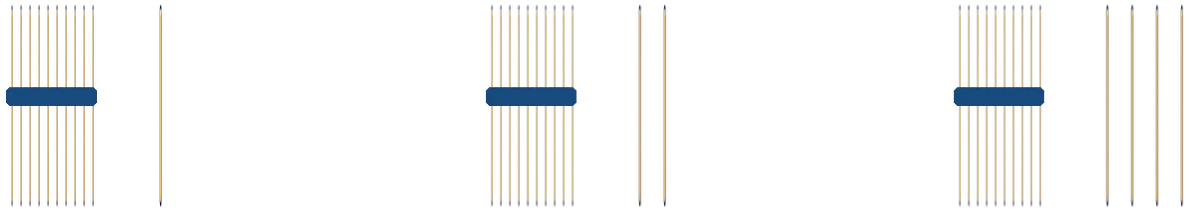
Now there are 40

Four full tens. No loose ones.



Adding increased the amount. Tying only organized it.

When the name hides the ten



Eleven

One ten and one more.

Twelve

One ten and two more.

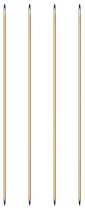
Fourteen

One ten and four more.



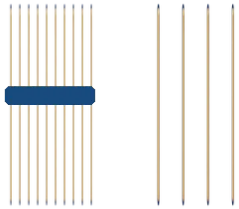
Say the ordinary name and show its structure.

Four stay on the mat



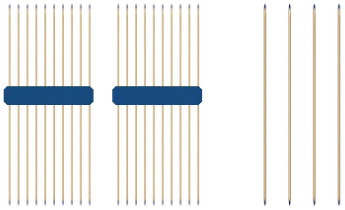
4

Four loose straws.



14

Add one whole ten.



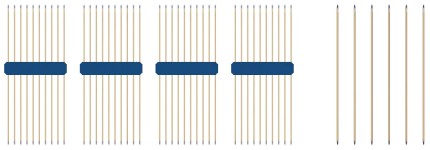
24

Add another ten. The four stay.



"What changed? What stayed?" Pointing is an answer.

One whole ten more



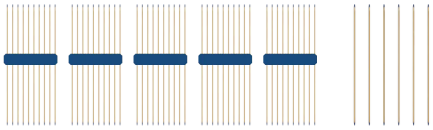
46

Four tens and six ones.



Bring one ten

The new bundle adds ten straws.



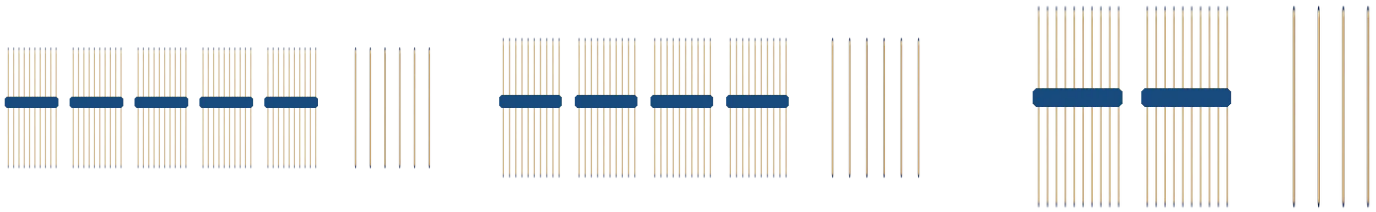
56

Five tens. The same six ones.



Let your child count everything to check if wanted.

One whole ten less



56

Five tens and six ones.

Return one bundle

Four tens and six ones: 46.

Another example: 34 → 24

Return one ten from 34. Twenty-four remain.

Leave the loose ones still. Remove a whole bundle.

Which trip is shorter?



60

70

Start at 68

The marks are equally spaced.

To 60: eight steps

Count spaces traveled, not the starting mark.

To 70: two steps

Seventy is closer.

Use the shorter journey to explain “closer.”

Estimate, then check



Begin with 8

Two steps to 10. Eight to 0.

Try 68

The same distances on a 60–70 line.

Now try 63

Three steps to 60. Seven to 70.



An estimate is a first idea, not a demand for perfect aim.

More coins, same value



Ten pennies

Ten coins worth ten cents.

One dime

One coin worth ten cents.

Trade back

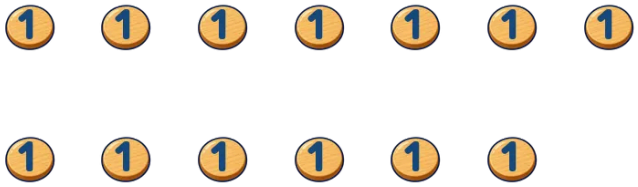
The value stays ten cents.



Ask clearly: “How many coins?” or “How many cents?”

Four coins. Thirteen cents.





A dime + 3 pennies

Four coins worth thirteen cents.

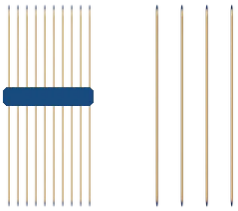
Exchange the dime

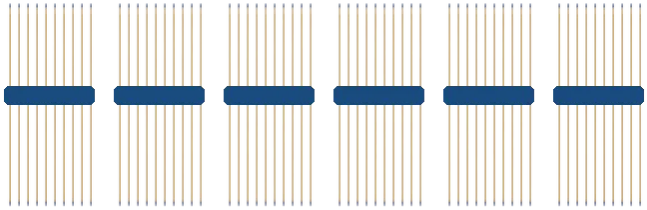
Thirteen pennies, still thirteen cents.



Replace one set with the other; do not keep both.

Match and name





1. Find the label

Build fourteen. Match it with 14.

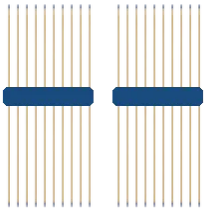
2. Six of what?

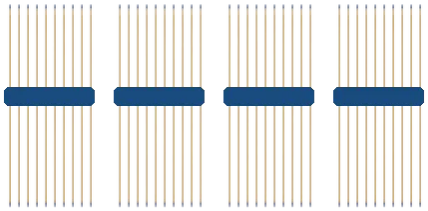
Compare six singles with six checked tens.



Easier: one model together, then a second amount.

Empty ones, then a new ten





3. A place for no ones

Build 20. Add three singles for 23; remove them again.

4. Make the next bundle

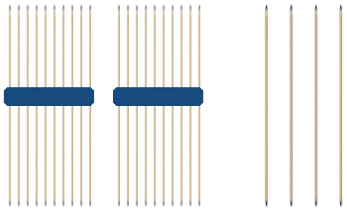
Add one to 39. Gather the ten loose ones: 40.



The straws inside full bundles never disappear.

Two kinds of number steps

20



5. A calendar crossing

Follow 18, 19, 20, 21 in date order.

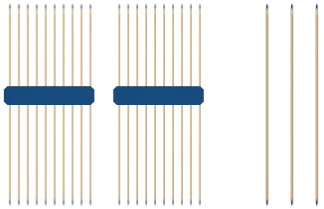
6. Four stay

Add tens to four: 4, 14, 24.



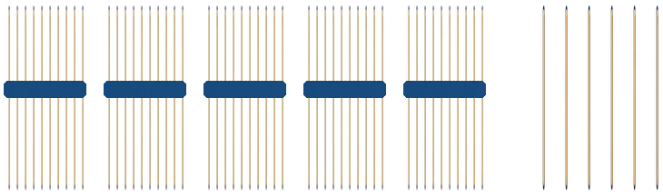
A calendar shows date order; bundles show tens.

Deliver a whole ten



7. The thirteen train

One ten joins 13. Now there are 23.



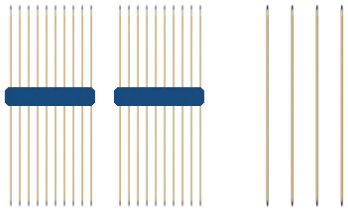
8. A bundle delivery

One ten joins 46. Now there are 56.



Say what stayed: the loose ones.

Take away and travel



9. A bundle goes home

Return one ten from 34. Twenty-four remain.



10. A walking line

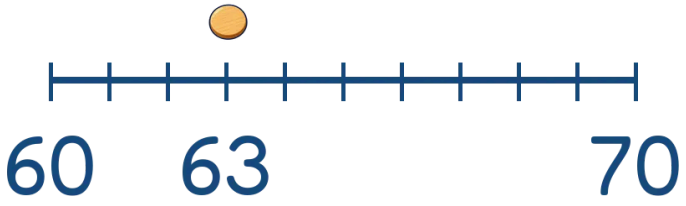
Move a toy one equal space per number.



The starting mark is not a step already traveled.

Find a position, compare a trip





11. Where might 68 live?

Estimate, then check with equal marks.

12. Which trip is shorter?

From 63: three to 60, seven to 70.



Add a halfway landmark if it helps.

Try a small kitchen bank





13. A penny-and-dime trade

Exchange ten pennies for a dime, then back.

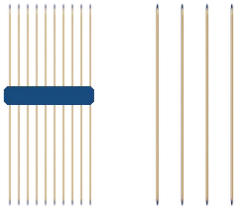
14. Twenty-three cents

Two dimes and three pennies: five coins.



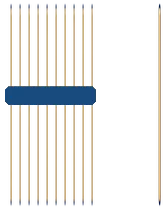
Use large play coins if small coins are unsuitable.

Make the next move manageable



Show something real

“Let’s build it and see.”



Make it smaller

“Would eleven feel easier?”



Offer a real stop

“We can leave it here.”



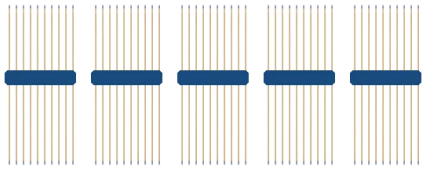
Help may include showing, naming, or doing it together.

One hundred is ten tens



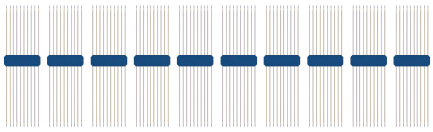
One full ten

Ten individual straws.



Five tens

Fifty individual straws.



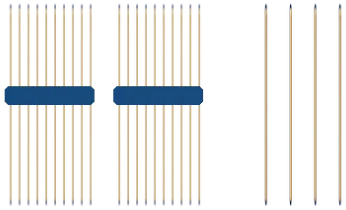
Ten tens

One hundred individual straws.



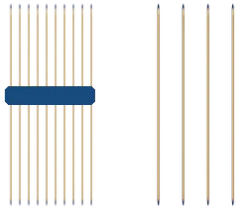
Count by tens with the bundles in view. Reopen one to check.

Useful things to notice



A chosen check

“Opened a bundle to verify 24.”



The unchanged part

“Kept four ones while adding a ten.”



A helpful landmark

“Used 70 to place 68.”



Share concrete observations with the teacher whenever you want support.

Sources behind the pictures

Place value develops in parts

Mix and colleagues, 2022.

Read the source

Teaching Math to Young Children

Frye and colleagues, 2013. Official IES guidance.

Read the source

Home activities are practical examples, not individually tested programs.

Keep the child at the center

Teen quantities as tens and ones

Ho and Fuson, 1998.

Read the source



No single activity diagnoses a difficulty or guarantees progress. Choose one welcome idea, offer help, and stop when needed.