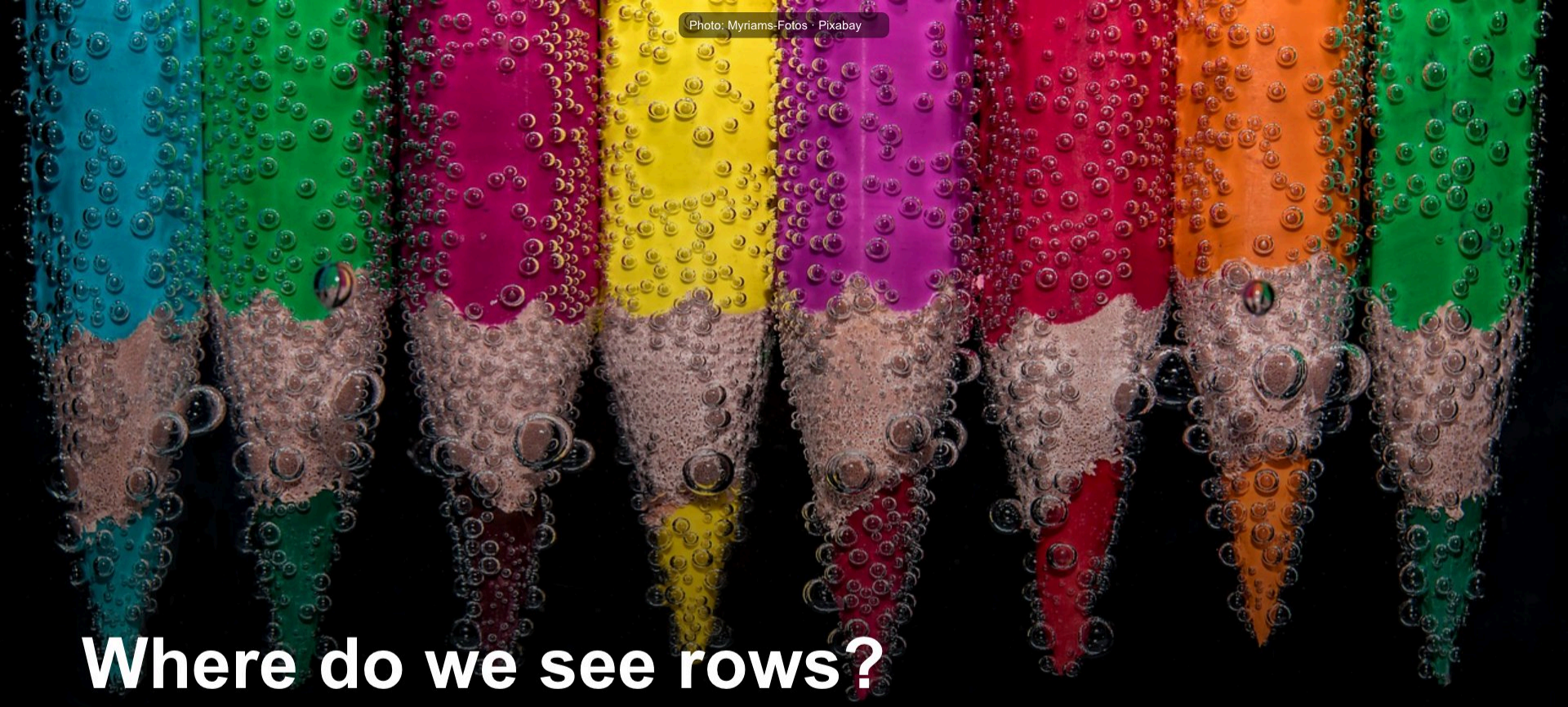
Big Multiplication Made Easy

Break numbers apart, multiply, then add



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Where do we see rows?

Pencils in neat rows make a rectangle. Rows times columns tells how many in all.

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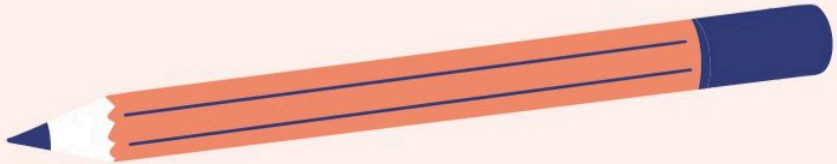
Two kinds of big jobs

Up to 4 digits x 1 digit

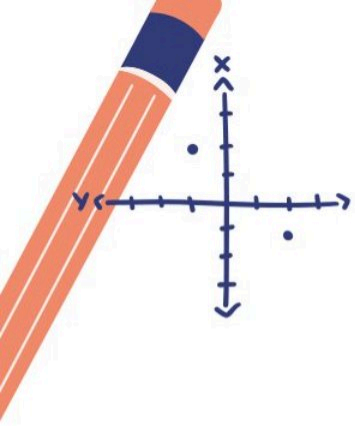
- Example: 1,213 x 4
- Break into thousands, hundreds, tens, ones
- Multiply each part, then add

2 digits x 2 digits

- Example: 23 x 15
- Break both numbers apart
- Multiply four small parts, then add



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Same steps every time

Step 1

Break apart by place value

Step 2

Multiply each small part

Step 3

Add parts to get total

Step 4

Estimate to check if close

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Which picture helps you most?

Which model makes multiplication clearest for you?

- **A** Rectangular array of dots
- **B** Area model box
- **C** Equation with partial products



Vote with your hands, then explain why.

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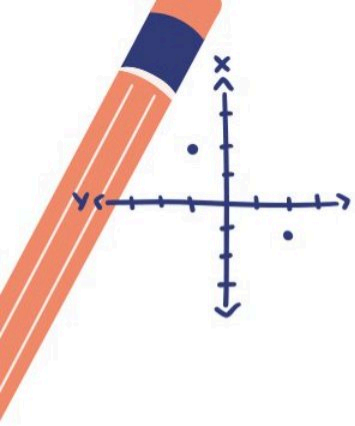
Watch: Break it into a rectangle



▶ 0:00 – 2:48

- Watch how numbers split into tens and ones
- See how small parts add to total

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Words that help us

Place value

What a digit is worth depends on where it sits in the number.

Break apart

Split 324 into 300 + 20 + 4.

Partial product

Answer to each small multiplication.

Area model

Rectangle cut to show each part.

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Watch: Two 2-digit numbers



▶ 0:00 – 5:00

- Watch tens times tens and ones separately
- See how four parts add up

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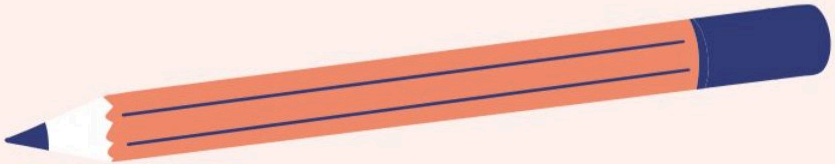
Your task

In pairs, solve 23 x 14 with an area model and 1,212 x 3 with an equation.

1. Draw a box split into 20+3 and 10+4.
2. Multiply four small parts, then add them.
3. Solve 1,212 x 3 as parts times 3, then add.

10 min

In pairs



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DID YOU KNOW?

The fast stacking method is just partial products in disguise.

It multiplies each place-value part, then adds, only written shorter.



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Think, pair, share

Why do we write a zero when we multiply by tens, like in 23 x 20?



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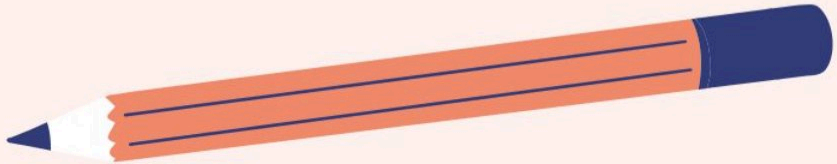
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Exit ticket

1. One thing I learned about area models is...

2. One question I still have is...

3. Solve 14 x 12 with any model: ___



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