# Leftovers Count! Division With Remainders

Grade 4 Math: 4-digit dividends, 1-digit divisors




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# A remainder is always smaller than the divisor

If your leftover is as big as the divisor, you can make one more group.








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# Quotient vs Remainder

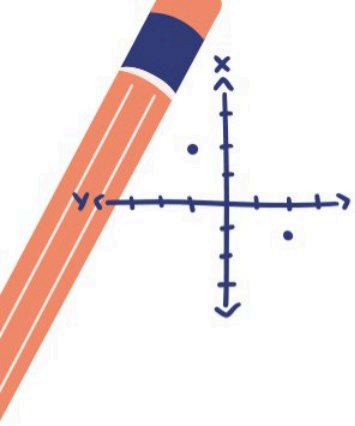
## Quotient

- How many full groups you make
- Check with multiply: quotient x divisor

## Remainder

- What is left after sharing
- Must be smaller than divisor

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# Our Long Division Steps

1. Divide one place-value part at a time
2. Multiply to show how much you used
3. Subtract to find what is still left
4. Bring down next digit and repeat
5. Small leftover is the remainder

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# What Should We Do?

**85 stickers shared by 4 kids. Each gets 21, 1 is left. What is fair?**

- **A** Keep 21 each, save 1 leftover
- **B** Try to give 22 to everyone
- **C** Cut the leftover into pieces



Vote with your hands, then explain why.



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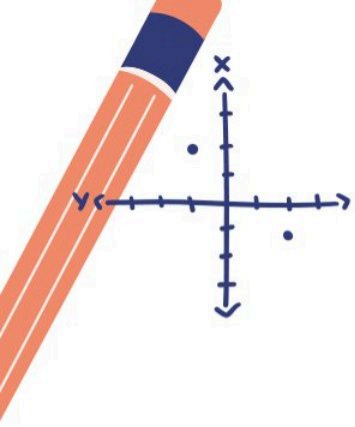
# See It With Models




▶ 0:00 – 5:00

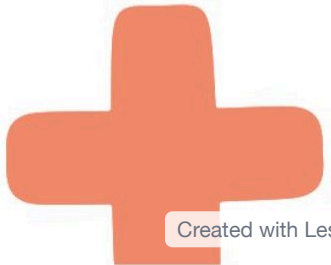
- Watch how hundreds, tens, ones get split
- Watch the multiply-check at the end

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# Break It Big First

- Split 127 into 100, 25, and 2
- 100 ÷ 5 = 20 and 25 ÷ 5 = 5
- Left with 2: answer is 25 R 2



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# Remainders Step by Step




▶ 0:00 – 1:16

- Listen for divide, multiply, subtract, bring down
- Spot when the remainder appears



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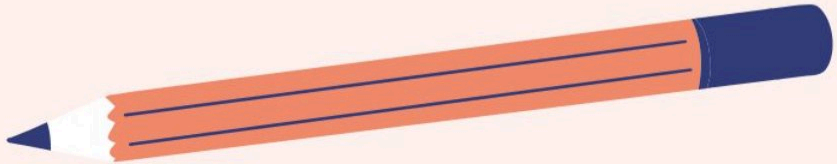
# Your task

**In pairs solve 87 ÷ 4 and 1,234 ÷ 3 with an area model.**

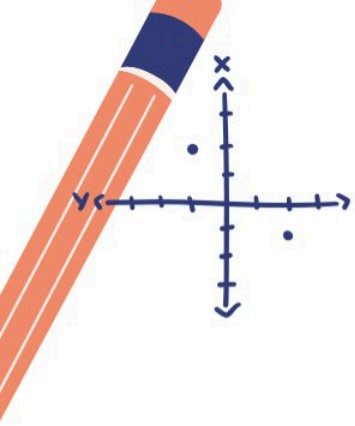
1. Split dividend into easy place-value parts
2. Divide, record equation and remainder
3. Check: (quotient x divisor) + remainder = dividend

**10 min**

**In pairs**



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# 3 Smart Strategies

## Place Value

Split big numbers into hundreds, tens, ones.

## Friendly Multiples

Use facts you know, like 10 x divisor.

## Multiply Check

Prove it: quotient x divisor + remainder.

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# What could this be?

10 cookies shared equally by 3 friends. Each gets 3. What is left?






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# Quick quiz

1. What is 85 ÷ 4?
2. What is 48 ÷ 5?
3. What must be true about a remainder?
4. What is 1,234 ÷ 3?

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