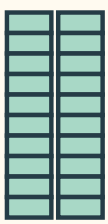
MATHS FIELD GUIDE · GRADE 2

Why we regroup when calculating

OPENING PROBLEM

Add five ones to 28. Where is the new ten?



2 tens



8 ones

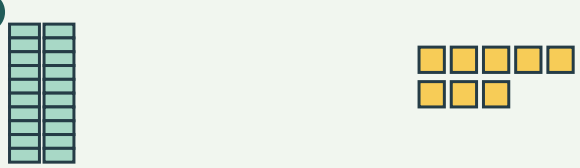
02 Trade without changing the amount
03 Rules and worked cases
04 Filling the pencil pots
05 Two routes to a total
06 Check your reasoning

ILLUSTRATED PROBLEM SHEET

Trade without changing the amount

One ten can be broken into ten ones, or ten ones can be bundled into a ten.

1



2 tens 8 ones

Add five ones to 28. Where is the new ten?

Eight plus five gives thirteen ones. Trade ten of them. Three tens and three ones make 33.

2



4 tens 2 ones

Take six ones from 42. How can you do it?

Trade one ten. Three tens and twelve ones minus six ones leaves 36.

3

Trade	Tens	Ones
Before	3	10
After	4	0

Did the total rise when the tens column rose?

Both rows mean forty. Ten ones disappeared into the bundle.

4

58 + 9
↓
58 + 10 − 1
↓
67

Why subtract one at the end?

Adding ten puts in one extra. Taking it back gives 67.

60 − 1
five tens and nine ones.

59 + 1
regroup to six tens.

CHAPTER PROBLEM

Why does exchanging one ten for ten ones not change the number?

Both represent ten units, so the total value stays the same.

MATHS REFERENCE · GRADE 2

Why we regroup when calculating

Regrouping means changing how an amount is bundled while keeping its value. Ten ones can become one ten. One ten can become ten ones.

Addition joins quantities. Subtraction can remove a quantity or find a difference. Place-value units help us calculate both.

Four cases to recognise

Situation	What to do and why
46 + 27	Six and seven make thirteen ones. Trade ten for a ten: 73.
52 − 18	Rename 52 as four tens and twelve ones. Take one ten and eight ones to leave 34.
38 + __ = 61	Count two to 40 and 21 to 61. The missing addend is 23.
Check 74 − 36 = 38	Add 38 and 36. Fourteen ones regroup and the result is 74.

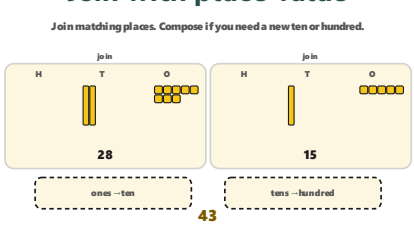
Read the model

Build the idea

For 28 + 15, join the ones: 8 + 5 gives 13 ones. Exchange ten of those ones for one ten.

Join the tens, including the new ten. Two tens plus one ten plus the new ten gives four tens. Three ones remain.

Join with place value



Two place-value models

Why it works

The exchanged ten still represents the same ten objects. Nothing is added just because we write a carried digit.

To subtract when there are too few ones, unpack one ten. Then we can remove the required ones without changing the starting amount.

regroup Rename the same amount using different bundles.
exchange Swap equal-valued groups.
difference How far apart two amounts are.

Had ○○○○○○○
Left ○○○

How many left the first group?

Four. Three remaining and four taken make seven.

WORKED INVESTIGATION

Filling the pencil pots

Each full pot holds ten pencils. Start with 28 pencils. Seven more arrive. Two fill the third pot and five remain loose.

Look at this part	What it tells you
28 + 2	30
30 + 5	35
28 + 7	35

Work it through

To take seven away from 35, remove five loose pencils and two from a full pot. Two pots and eight loose pencils remain.

Catch the mistake

Writing 215 for 28 + 7 records 15 ones beside two tens. Exchange ten of the ones before recording the answer.

Compare the cases

Follow an example

For 42 − 17, rename 42 as three tens and twelve ones. Remove seven ones to leave five. Remove one ten to leave two.

The result is 25. Check by joining 25 and 17: they make 42.

What changes? What stays true?

Keep tens with tens and ones with ones. Aligning the columns keeps the units organised.

Regroup only when needed. For 23 + 14, the ones make seven, so no new ten needs to be exchanged.

Change one condition

For 28 + 1 there is room for the extra pencil without an exchange. For 28 + 2 a pot fills exactly.



How many more counters does A have?

Five pairs use five from each group. Two are unmatched.

ILLUSTRATED PROBLEM SHEET

Two routes to a total

You can count on, make a pair, or first fill a ten.

1

A ○○○○○○

B ○○

Start at six. Where do two more land?

Seven, eight. The sum is eight.

2

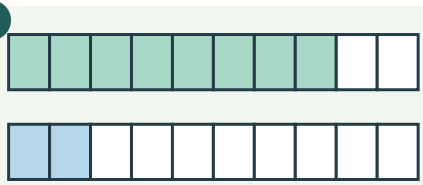
A ○○○○

B ○○○○

Which double do you see?

Four and four give eight without counting each dot again.

3



How many are needed to fill ten from eight?

Two spaces. From 8 + 5, use two, then add the other three to ten: 13.

4

A ○○○○○

B ○○○

If one counter moves from A to B, does the sum change?

Four plus four still gives eight.

7 + 6
double six, then one more: 13.

7 + 6
make ten with three, then add three: 13.

CHAPTER PROBLEM

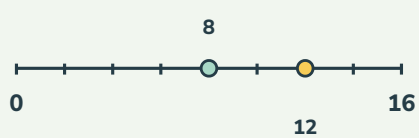
You have 52 beads. Give away 28. How many are left? Show the ten you exchange.

52 is 4 tens and 12 ones. Remove 2 tens and 8 ones. The 2 tens and 4 ones left make 24.

QUESTION BANK · FOLD OR COVER THE RIGHT COLUMN

Check your reasoning

Try the problem	Solution and reasoning
01 Which is closer to 100, 48 + 49 or 54 + 48?	97 is three away. 102 is two away, so the second sum is closer.
02 Which is easier to make into a ten, 9 + 4 or 6 + 7?	Both work. Nine needs one, while six needs four. Each total is thirteen.
03 There are 43 pencils. After eight leave, how many are left?	Exchange one ten for ten ones. Thirteen ones minus eight leaves five ones beside three tens, so 35 remain.
04 Break 63 into tens and ones to find 63 − 29.	Five tens and thirteen ones minus two tens and nine ones leaves three tens and four ones: 34.
05 Which is nearer 100, 47 + 48 or 56 + 46?	The sums are 95 and 102. Two away is nearer than five away.



How much must you add to eight to reach twelve?

Two steps to ten, then two to twelve. The gap is four.

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