Think Before You Add

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247 + 126 Will the sum be more or less than 370? ☐ more ☐ less

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Kris says: 318 + 245 is *less* than 560, because 3 + 2 = 5 hundreds and 1 + 4 = 5 tens.

Is Kris correct? ☐ yes ☐ no Explain why.

3 Which answer makes sense?

437 + 148 = ☐ 575 ☐ 585 ☐ 5715

Tick the answer that makes sense. Why are the other two wrong?

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627 + 265 Will the sum be in the 800s or the 900s? ☐ 800s ☐ 900s

How do you know?

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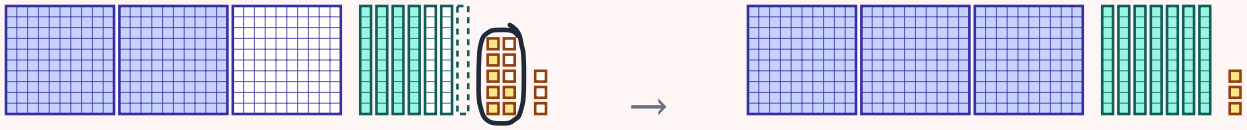
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WORKED EXAMPLE

247 + 126 = 373



Join: 3 hundreds, 6 tens, 13 ones.
Circle 10 ones. Trade them for 1 ten.

After: 3 hundreds, 7 tens, 3 ones

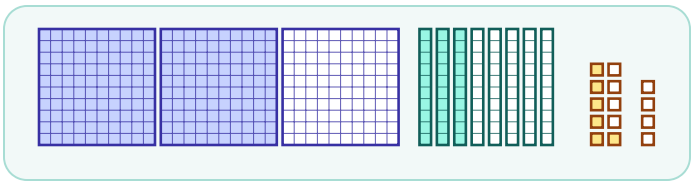
	Hundreds	Tens	Ones
joined	3	6	13
traded	3	7	3

	H	T	O
	2	4	7
+	1	2	6
	☐	1	
	3	7	3

The new ten is written in the **tens**: 4 + 2 + **1** = 7 tens. It is *a* ten, not *a* hundred, because it was made from 10 ones.

7 Your turn, with help

The pieces of **236 + 158** are joined. Circle 10 ones. Draw the new ten. Fill in the chart.



	Hundreds	Tens	Ones
joined			
traded			

236 + 158 = _____ Do the 9 tens make *a* new hundred? _____

8 On your own

Make *a* quick drawing of **429 + 135**: *a* square for each hundred, *a* stick for each ten, *a* dot for each one. Make *a* ten. Fill in the chart.

Draw here.

	Hundreds	Tens	Ones
joined			
traded			

= _____

New Ten or Not?

GOAL Decide when the ones make a new ten, then add.

9 Will the ones make a new ten?

For each sum, decide first: will the ones make a new ten? Then add, and write any new ten in its box.

a. 345 + 128

New ten? ☐ yes ☐ no

	H	T	O
	3	4	5
+	1	2	8
	☐	☐	

b. 263 + 524

New ten? ☐ yes ☐ no

	H	T	O
	2	6	3
+	5	2	4
	☐	☐	

c. 518 + 375

New ten? ☐ yes ☐ no

	H	T	O
	5	1	8
+	3	7	5
	☐	☐	

d. 604 + 279

New ten? ☐ yes ☐ no

	H	T	O
	6	0	4
+	2	7	9
	☐	☐	

e. 326 + 154

New ten? ☐ yes ☐ no

	H	T	O
	3	2	6
+	1	5	4
	☐	☐	

f. 436 + 251

New ten? ☐ yes ☐ no

	H	T	O
	4	3	6
+	2	5	1
	☐	☐	

Explain the Trade

GOAL Show that a trade keeps the amount the same, and find trading mistakes.

10 Who is right?

Ana says: 4 hundreds, 6 tens and 15 ones is the *same amount* as 4 hundreds, 7 tens and 5 ones.

Ben says: 4 hundreds, 7 tens and 5 ones is *more*, because it has one more ten.

I think _____ is right because

11 Find Kai's mistake

Kai's work

	H	T	O
	3	6	8
+	2	1	5
	1		
	6	7	3

Kai made a new ten from 8 + 5 = 13 ones. Where did Kai write it? Where does it belong?

368 + 215 = _____

12 Check Jo's chart

Jo added **254 + 139** and filled in a chart.

	Hundreds	Tens	Ones
joined	3	8	13
Jo's trade	3	8	3
fixed			

Joined: 300 + 80 + 13 = _____

Jo's trade: 300 + 80 + 3 = _____

Is the amount still the same? _____

What did Jo forget? Fix the last row.

Show What You Know

GOAL Use the trade to find missing digits, make your own sum, and write a story.

13 Missing digits

Write the missing digit in each box. Check by adding.

26□ + 125 = 393	5□8 + 217 = 785	356 + □29 = 685
4□5 + 238 = 663	309 + 2□6 = 565	6□7 + 125 = 772

14 Make your own

Write two 3-digit numbers whose ones make a new ten, but whose tens do **not** make a new hundred. Keep the sum less than 1,000. Add them and show the trade.

_____ + _____ = _____

Show the trade.

15 Check yourself

556 + 238 = _____

Tens: 5 + 3 + ___ = ___ tens.

A new hundred? _____

452 + 336 = _____

Did you trade? _____ Why?

16 Write a story

Write a story that matches **256 + 137**. Then solve it.

Answer: _____

Think Before You Add

GOAL Decide what a sum will be close to, and which places will trade, before you add.

1 More or less?

249 + 186 Will the sum be more or less than 400? ☐ more ☐ less

How do you know?

2 Is Lena correct?

Lena says: 376 + 248 needs only one trade, because only the ones make a new ten.

Is Lena correct? ☐ yes ☐ no Explain why.

3 Which answer makes sense?

457 + 286 = ☐ 733 ☐ 743 ☐ 643

Tick the answer that makes sense. Why are the other two wrong?

4 Which hundreds?

385 + 128 Will the sum be in the 400s or the 500s? ☐ 400s ☐ 500s

How do you know?

5 Is Theo correct?

Theo says: In 492 + 309 the tens are 9 + 0 = 9, so the tens will not trade.

Is Theo correct? ☐ yes ☐ no Explain why.

Two Trades in One Sum

GOAL Add three-digit numbers that need two trades, and explain each trade.

6 Notice

Which sum needs **two** trades? ☐ **247 + 126** ☐ **268 + 157**

How can you tell before adding? _____

7 Notice again

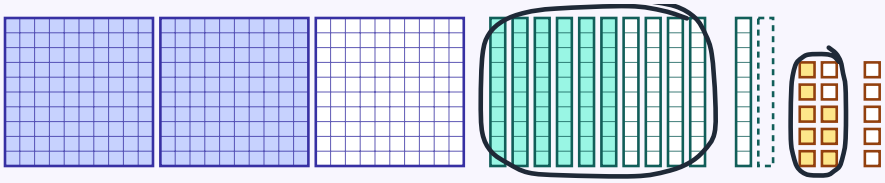
Which sum needs **two** trades? ☐ **356 + 172** ☐ **437 + 285**

Which place trades in the other sum? _____

8 Watch two trades

WORKED EXAMPLE

268 + 157 = 425



Shaded: 268
White: 157
Circled: 10 ones and 10 tens

	Hundreds	Tens	Ones
joined	3	11	15
trade 1	3	12	5
trade 2	4	2	5

Trade 1. 8 + 7 = 15 ones. Trade 10 ones for 1 ten: write 5 ones and put the new ten with the tens.
Trade 2. 6 + 5 + **1** = 12 tens. Trade 10 tens for 1 hundred: write 2 tens and put the new hundred with the hundreds.
Hundreds. 2 + 1 + **1** = 4 hundreds.

	H	T	O
	2	6	8
+	1	5	7
	1	1	
	4	2	5

In the column, each small **1** is written in the place it moves to, just above the line: the first is **1 ten**, the second is **1 hundred**.

Two Trades, Step by Step

GOAL Add with two trades one place at a time, and write each new unit in its box.

9 Your turn, with help

Work one place at a time. Fill each box, then write the sum in the column too.

a. 358 + 265

Ones: 8 + 5 = ☐ ones. Write ☐ ones, trade 10 ones for ☐ ten.

Tens: 5 + 6 + ☐ = ☐ tens. Write ☐ tens, trade 10 tens for ☐ hundred.

Hundreds: 3 + 2 + ☐ = ☐ hundreds.

358 + 265 = _____

	H	T	O
	3	5	8
+	2	6	5
	☐	☐	

b. 189 + 246

Ones: 9 + 6 = ☐ ones. Write ☐ ones, trade 10 ones for ☐ ten.

Tens: 8 + 4 + ☐ = ☐ tens. Write ☐ tens, trade 10 tens for ☐ hundred.

Hundreds: 1 + 2 + ☐ = ☐ hundreds.

189 + 246 = _____

	H	T	O
	1	8	9
+	2	4	6
	☐	☐	

Which Places Trade?

GOAL Decide which places will trade before you add.

10 Which places trade?

First tick the places that will trade. Then add.

248 + 136

Trades:
☐ ones ☐ tens ☐ none

H	T	O
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Trades:
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H	T	O
3	9	5
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☐	☐	

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Trades:
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H	T	O
4	0	5
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☐	☐	

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In 268 + 157, the small 1 in the hundreds column is worth **100**, not 1. Why?

Find and Fix

GOAL Find trading and lining-up mistakes, and explain them.

12 Find Leo's mistake

Leo's work

	H	T	O
	4	7	6
+	3	5	8
	1	☐	
	8	2	4

Circle the column where Leo made a mistake. What did he forget?

_____

_____

476 + 358 = _____

13 Find Ana's mistake

Ana's work

	H	T	O
	3	8	5
+	4	6	
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What went wrong? Add it the right way.

_____

_____

	H	T	O
+		☐	☐

385 + 46 = _____

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Write two 3-digit numbers that need a trade in the ones **and** in the tens. Keep the sum less than 1,000. Add them.

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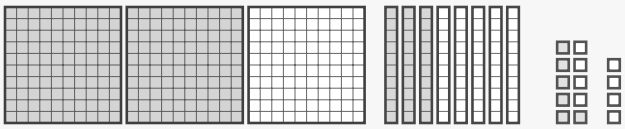
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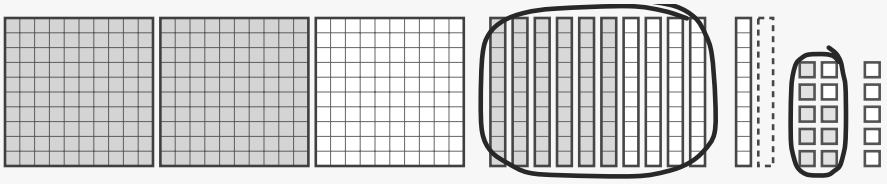
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In the column, each small **1** is written in the place it moves to, just above the line: the first is **1 ten**, the second is **1 hundred**.

Two Trades, Step by Step

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Work one place at a time. Fill each box, then write the sum in the column too.

a. 358 + 265

Ones: 8 + 5 = ☐ ones. Write ☐ ones, trade 10 ones for ☐ ten.

Tens: 5 + 6 + ☐ = ☐ tens. Write ☐ tens, trade 10 tens for ☐ hundred.

Hundreds: 3 + 2 + ☐ = ☐ hundreds.

358 + 265 = _____

H	T	O
	3	5	8
+	2	6	5
	☐	☐	

b. 189 + 246

Ones: 9 + 6 = ☐ ones. Write ☐ ones, trade 10 ones for ☐ ten.

Tens: 8 + 4 + ☐ = ☐ tens. Write ☐ tens, trade 10 tens for ☐ hundred.

Hundreds: 1 + 2 + ☐ = ☐ hundreds.

189 + 246 = _____

H	T	O
	1	8	9
+	2	4	6
	☐	☐	

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248 + 136

Trades:
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H	T	O
2	4	8
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☐	☐	

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Trades:
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H	T	O
2	7	3
+ 1	5	4
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386 + 247

Trades:
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H	T	O
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Trades:
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H	T	O
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☐	☐	

395 + 207

Trades:
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H	T	O
3	9	5
+ 2	0	7
☐	☐	

405 + 95

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H	T	O
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11 Explain

In 268 + 157, the small 1 in the hundreds column is worth **100**, not 1. Why?

Find and Fix

GOAL Find trading and lining-up mistakes, and explain them.

12 Find Leo's mistake

Leo's work

	H	T	O
	4	7	6
+	3	5	8
	1	☐	
	8	2	4

Circle the column where Leo made a mistake. What did he forget?

476 + 358 = _____

13 Find Ana's mistake

Ana's work

	H	T	O
	3	8	5
+	4	6	
	8	4	5

What went wrong? Add it the right way.

	H	T	O
+		☐	☐

385 + 46 = _____

14 Make your own

Write two 3-digit numbers that need a trade in the ones **and** in the tens. Keep the sum less than 1,000. Add them.

_____ + _____ = _____

Show your work.

Think Before You Add

Answers in blue. Accept other clear reasons that use the hundreds, tens and ones.

1 More or less?

247 + 126 Will the sum be more or less than 370? ☑ more ☐ less

How do you know?

200 + 100 = 300 and 40 + 20 = 60, so 360. The ones, 7 + 6 = 13, add more than 10.

2 Is Kris correct?

Kris says: 318 + 245 is *less* than 560, because 3 + 2 = 5 hundreds and 1 + 4 = 5 tens.

Is Kris correct? ☐ yes ☑ no Explain why.

No. 8 + 5 = 13 ones make another ten, so there are 6 tens: 563 is more than 560.

3 Which answer makes sense?

437 + 148 = ☐ 575 ☑ 585 ☐ 5715

Tick the answer that makes sense. Why are the other two wrong?

575 forgets the new ten from 15 ones. 5715 writes 15 in the ones place: it is far too big.

4 Which hundreds?

627 + 265 Will the sum be in the 800s or the 900s? ☑ 800s ☐ 900s

How do you know?

600 + 200 = 800. 27 + 65 = 92, which is less than 100, so the sum stays in the 800s.

5 Is Omar correct?

Omar says: 164 + 223 will need a trade, because the numbers are big.

Is Omar correct? ☐ yes ☑ no Explain why.

No. 4 + 3 = 7 ones, not enough for a ten. Big numbers do not always need a trade.

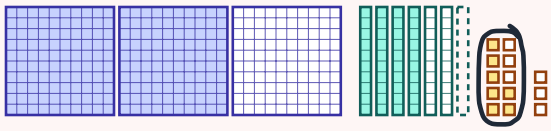
Trade 10 Ones for 1 Ten

Answers in blue. Task 7: any 10 of the 14 ones may be circled. Task 8: any clear quick drawing is fine.

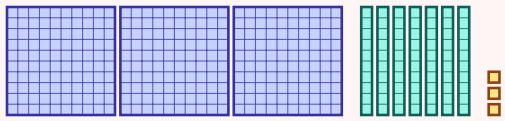
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WORKED EXAMPLE

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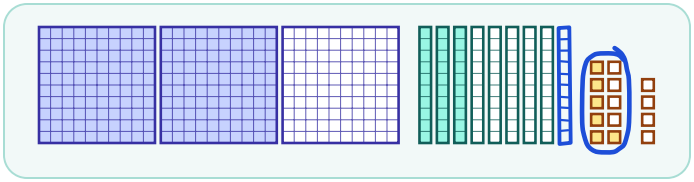
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	H	T	O
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The new ten is written in the **tens**: 4 + 2 + **1** = 7 tens. It is *a* ten, not *a* hundred, because it was made from 10 ones.

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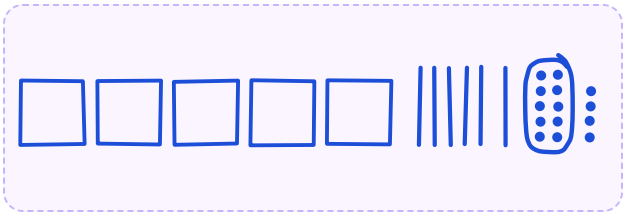


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	Hundreds	Tens	Ones
joined	5	5	14
traded	5	6	4

= 564

New Ten or Not?

Answers in blue, with each new ten in its box.

9 Will the ones make a new ten?

For each sum, decide first: will the ones make a new ten? Then add, and write any new ten in its box.

a. 345 + 128

New ten? ☑ yes ☐ no

	H	T	O
	3	4	5
+	1	2	8
		1	
	4	7	3

b. 263 + 524

New ten? ☐ yes ☑ no

	H	T	O
	2	6	3
+	5	2	4
	7	8	7

c. 518 + 375

New ten? ☑ yes ☐ no

	H	T	O
	5	1	8
+	3	7	5
		1	
	8	9	3

d. 604 + 279

New ten? ☑ yes ☐ no

	H	T	O
	6	0	4
+	2	7	9
		1	
	8	8	3

e. 326 + 154

New ten? ☑ yes ☐ no

	H	T	O
	3	2	6
+	1	5	4
		1	
	4	8	0

f. 436 + 251

New ten? ☐ yes ☑ no

	H	T	O
	4	3	6
+	2	5	1
	6	8	7

c. 518 + 375: 1 + 7 + 1 = 9 tens, so no new hundred. **e. 326 + 154:** 6 + 4 = 10 ones, exactly one new ten and 0 ones: 480.

Explain the Trade

Answers in blue. Task 12: Jo's fixed row is 3, 9, 3.

10 Who is right?

Ana says: 4 hundreds, 6 tens and 15 ones is the *same amount* as 4 hundreds, 7 tens and 5 ones.

Ben says: 4 hundreds, 7 tens and 5 ones is *more*, because it has one more ten.

I think **Ana** is right because

400 + 60 + 15 = 475 and 400 + 70 + 5 = 475. The extra ten was made from 10 of the ones.

11 Find Kai's mistake

Kai's work

	H	T	O
	3	6	8
+	2	1	5
	1		
	6	7	3

Kai made a new ten from 8 + 5 = 13 ones. Where did Kai write it? Where does it belong?

In the hundreds. It belongs in the tens: it is 1 ten, made from 10 ones.

368 + 215 = 583

12 Check Jo's chart

Jo added **254 + 139** and filled in a chart.

	Hundreds	Tens	Ones
joined	3	8	13
Jo's trade	3	8	3
fixed	3	9	3

Joined: 300 + 80 + 13 = **393**

Jo's trade: 300 + 80 + 3 = **383**

Is the amount still the same? **no**

What did Jo forget? Fix the last row.

She took 10 ones away but did not add the new ten.

Show What You Know

Answers in blue. Tasks 14 and 16 have many right answers.

13 Missing digits

Write the missing digit in each box. Check by adding.

26 **8** + 125 = 393	5 **6** 8 + 217 = 785	356 + **3** 29 = 685
4 **2** 5 + 238 = 663	309 + 2 **5** 6 = 565	6 **4** 7 + 125 = 772

5□8 + 217: 8 + 7 = 15 makes a new ten, so 6 + 1 + 1 = 8 tens (forgetting it gives 7).

14 Make your own

Write two 3-digit numbers whose ones make a new ten, but whose tens do **not** make a new hundred. Keep the sum less than 1,000. Add them and show the trade.

438 + **145** = **583**

Show the trade.

One answer: 438 + 145. 8 + 5 = 13 ones: trade 10 ones for 1 ten; 3 + 4 + 1 = 8 tens; 4 + 1 = 5 hundreds: 583. **Accept any correct sum under 1,000** whose ones make 10 or more and whose tens plus the new ten make 9 or less.

15 Check yourself

556 + 238 = 794

Tens: 5 + 3 + **1** = **9** tens.

A new hundred? **no**

452 + 336 = 788

Did you trade? **no** Why?

2 + 6 = 8 ones: not enough for a ten.

16 Write a story

Write a story that matches **256 + 137**. Then solve it.

One story: A library had 256 books and got 137 more. How many books does it have now? 393 books.

Answer: **393**

Think Before You Add

Answers in blue. Accept other clear reasons.

1 More or less?

249 + 186 Will the sum be more or less than 400? ☑ more ☐ less

How do you know?

200 + 100 = 300, and 49 + 86 is more than 100, so the sum is more than 400.

2 Is Lena correct?

Lena says: 376 + 248 needs only one trade, because only the ones make a new ten.

Is Lena correct? ☐ yes ☑ no Explain why.

No. 6 + 8 = 14 ones make a new ten, then 7 + 4 + 1 = 12 tens make a new hundred.

3 Which answer makes sense?

457 + 286 = ☐ 733 ☑ 743 ☐ 643

Tick the answer that makes sense. Why are the other two wrong?

733 forgets the new ten from 13 ones. 643 forgets the new hundred from 14 tens.

4 Which hundreds?

385 + 128 Will the sum be in the 400s or the 500s? ☐ 400s ☑ 500s

How do you know?

300 + 100 = 400, and 85 + 28 = 113, more than 100, so the sum is in the 500s.

5 Is Theo correct?

Theo says: In 492 + 309 the tens are 9 + 0 = 9, so the tens will not trade.

Is Theo correct? ☐ yes ☑ no Explain why.

No. 2 + 9 = 11 ones make a new ten, so the tens are 9 + 0 + 1 = 10: they trade too.

Two Trades in One Sum

Answers in blue. The new units can also be written above the top number; accept either if they are in the right column.

6 Notice

Which sum needs **two** trades? ☐ **247 + 126** ☑ **268 + 157**

How can you tell before adding? 15 ones make a ten; then 6 + 5 + 1 = 12 tens make a hundred.

7 Notice again

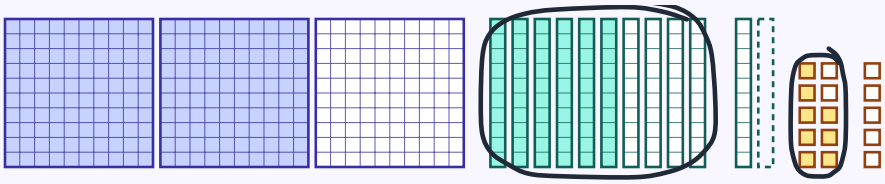
Which sum needs **two** trades? ☐ **356 + 172** ☑ **437 + 285**

Which place trades in the other sum? Only the tens: 6 + 2 = 8 ones, but 5 + 7 = 12 tens.

8 Watch two trades

WORKED EXAMPLE

268 + 157 = 425



Shaded: 268
White: 157
Circled: 10 ones and 10 tens

	Hundreds	Tens	Ones
joined	3	11	15
trade 1	3	12	5
trade 2	4	2	5

Trade 1. 8 + 7 = 15 ones. Trade 10 ones for 1 ten: write 5 ones and put the new ten with the tens.
Trade 2. 6 + 5 + **1** = 12 tens. Trade 10 tens for 1 hundred: write 2 tens and put the new hundred with the hundreds.
Hundreds. 2 + 1 + **1** = 4 hundreds.

	H	T	O
	2	6	8
+	1	5	7
	1	1	
	4	2	5

In the column, each small **1** is written in the place it moves to, just above the line: the first is **1 ten**, the second is **1 hundred**.

Two Trades, Step by Step

Answers in blue, with each new ten or hundred in its box.

9 Your turn, with help

Work one place at a time. Fill each box, then write the sum in the column too.

a. 358 + 265

Ones: 8 + 5 = [13] ones. Write [3] ones, trade 10 ones for [1] ten.

Tens: 5 + 6 + [1] = [12] tens. Write [2] tens, trade 10 tens for [1] hundred.

Hundreds: 3 + 2 + [1] = [6] hundreds.

358 + 265 = 623

	H	T	O
	3	5	8
+	2	6	5
	1	1	
	6	2	3

b. 189 + 246

Ones: 9 + 6 = [15] ones. Write [5] ones, trade 10 ones for [1] ten.

Tens: 8 + 4 + [1] = [13] tens. Write [3] tens, trade 10 tens for [1] hundred.

Hundreds: 1 + 2 + [1] = [4] hundreds.

189 + 246 = 435

	H	T	O
	1	8	9
+	2	4	6
	1	1	
	4	3	5

Which Places Trade?

Answers in blue, with each new ten or hundred in its box.

10 Which places trade?

First tick the places that will trade. Then add.

248 + 136

Trades: ☑ ones ☐ tens ☐ none

H	T	O
	2	4	8
+	1	3	6
	☐	1	
	3	8	4

273 + 154

Trades: ☐ ones ☑ tens ☐ none

H	T	O
	2	7	3
+	1	5	4
	1	☐	
	4	2	7

386 + 247

Trades: ☑ ones ☑ tens ☐ none

H	T	O
	3	8	6
+	2	4	7
	1	1	
	6	3	3

214 + 123

Trades: ☐ ones ☐ tens ☑ none

H	T	O
	2	1	4
+	1	2	3
	☐	☐	
	3	3	7

395 + 207

Trades: ☑ ones ☑ tens ☐ none

H	T	O
	3	9	5
+	2	0	7
	1	1	
	6	0	2

405 + 95

Trades: ☑ ones ☑ tens ☐ none

H	T	O
	4	0	5
+		9	5
	1	1	
	5	0	0

Look closely: 395 + 207: 12 ones trade; then 9 + 0 + 1 = 10 tens trade, leaving 0 tens: 602. 405 + 95: 95 has no hundreds, so its 9 lines up under the 0 tens: 500.

11 Explain

In 268 + 157, the small 1 in the hundreds column is worth **100**, not 1. Why?

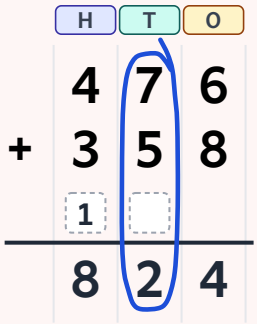
It is the 10 tens we traded: 10 tens = 1 hundred = 100.

Find and Fix

Answers in blue. Task 14 has many right answers.

12 Find Leo's mistake

Leo's work



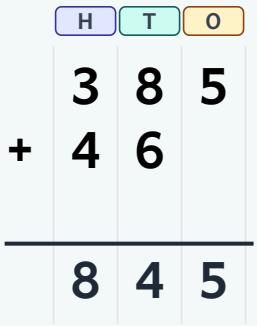
Circle the column where Leo made a mistake. What did he forget?

The tens. He forgot the new ten from 14 ones.

476 + 358 = 834

13 Find Ana's mistake

Ana's work



What went wrong? Add it the right way.

46 is lined up as if it were 460.



385 + 46 = 431

14 Make your own

Write two 3-digit numbers that need a trade in the ones **and** in the tens. Keep the sum less than 1,000. Add them.

568 + 275 = 843

Show your work.

One answer: 568 + 275 = 843 (8 + 5 = 13 ones; 6 + 7 + 1 = 14 tens). **Accept** any pair where the ones make 10 or more and the tens, with the new ten, make 10 or more, and the sum is under 1,000.

Trade 10 Ones for 1 Ten (Three Digits): teaching notes

GOAL

Student goal: trade 10 ones for 1 ten when adding three-digit numbers, and explain why the new ten goes in the tens. **Precisely:** one ones-to-tens composition within 1,000, with near misses where the tens reach 9 and do not compose a hundred.

BEFORE THIS LESSON

Trading ones for a ten with two-digit numbers (A07), hundreds as ten tens (B15) and three-digit sums with no trade (B17). **Quick check:** "Show 352 with blocks. Now show it with only 4 tens." (3 hundreds, 4 tens, 12 ones.)

MATERIALS AND PACING

Base-ten flats, rods and cubes, one set per pair; on paper, the quick drawing (a square for a hundred, a stick for a ten, a dot for a one). Tasks 1–9 make one lesson (think first, teach, practise); tasks 10–16 suit a second day or homework.

THINK BEFORE YOU ADD (TASKS 1–5)

Five ways to reason about a sum without working it all out: more or less than a number, a claim to judge (Kris forgets the ones), an answer that makes sense, which hundreds, and a claim that big numbers always trade (Omar). Ask for reasons, not sums. These are the habits the trade depends on: looking at the ones first, and knowing what a sensible answer is.

TEACH (TASK 6)

Build 247 and 126, join them, count 3 hundreds, 6 tens, 13 ones. Ask: *"Can we make another ten? Another hundred?"* Swap 10 cubes for a rod. Then point at the column: the small 1 in the tens box is that rod. Ask: *"Why does it go in the tens and not the hundreds?"* (It is one ten.)

GUIDED AND INDEPENDENT (TASKS 7–8)

Task 7 is a near miss: after the trade there are 9 tens, which is not a new hundred. Task 8 moves to quick drawings, the bridge to the written method.

PRACTICE AND REASONING (TASKS 9–16)

Task 9 mixes sums with and without a trade, a near miss (518 + 375: 9 tens), a zero in the tens (604 + 279) and exactly 10 ones (326 + 154 = 480). Task 10 is about the amount staying the same; task 11 is a new ten written in the hundreds; task 12 is a trade that lost a ten (the amount changed). In task 13 the four missing tens digits only work if the new ten is counted; have students check all six by adding.

MISCONCEPTIONS AND RESPONSES

- **Writes the new ten in the hundreds** (Kai's 673 for 368 + 215). Build it: the rod made from 10 cubes is a ten. Ask: "Is this worth 10 or 100?"
- **Writes 15 in the ones** (5715 for 437 + 148). "Can one place hold 15?"
- **Takes away 10 ones but forgets the new ten** (Jo's 383 for 254 + 139). Ask: "Is it still worth the same?"
- **Trades the tens when they reach 9** (518 + 375 = 903: 9 tens swapped for a hundred). "Do you have ten tens?"
- **Thinks the trade changes the amount** (Ben). Count all the pieces before and after.

Trade 10 Ones for 1 Ten (Three Digits): teaching notes (continued)

WHAT TO LOOK FOR

Secure: sensible reasons in tasks 1–5, correct sums, new tens in the tens box, "no" for the near misses with a reason, and an explanation that names 10 ones as 1 ten. Developing: correct sums but the new ten written above the wrong column or not written. Needs support: 15 written in the ones place; go back to blocks.

SUPPORT AND EXTENSION

Support: do tasks 6–9 with blocks first; cut task 9 to a, b and c. **Extension:** "Find a pair where the ones make a new ten and the tens then make exactly 9." "Which is more: 3 hundreds 8 tens 17 ones, or 3 hundreds 9 tens 6 ones?" (397 and 396.)

ABOUT THE GRADE

Common Core and NC teach three-digit addition with models and strategies in Grade 2. Common Core expects fluency in Grade 3; current NC Grade 3 asks for addition up to and including 1,000 without the word "fluently" (NC 2026 adds procedural fluency). Florida explores it in Grade 2; Texas expects it in Grade 3 (3.4(A)).

STANDARDS

Set	Direct	Supporting
Common Core	2.NBT.B.7; 2.NBT.B.9 (explaining the trade and where the new ten goes, tasks 10–12); 3.NBT.A.2	2.NBT.A.1
NC 2017 (current)	NC.2.NBT.7; NC.3.NBT.2	NC.2.NBT.1
NC 2026 (adopted; from 2028–29)	2.ANR.7.2; 2.ANR.7.3; 3.ANR.2.2	3.ANR.2.3
Florida B.E.S.T.	MA.2.NSO.2.4 (Grade 2 "explore"); MA.3.NSO.2.1	
Texas TEKS	3.4(A)	2.4(C) (Grade 2 works within 1,000 in problems)

Standards crosswalk, verified 2026-11-04 against corestandards.org, NC DPI (2017 SCOS; 2026 SCOS adopted Oct 1, 2026, in classrooms from 2028–29), FLDOE B.E.S.T. and TEA TEKS.

Two Trades in One Sum: teaching notes

GOAL

Students: I can add three-digit numbers that need two trades and explain each one. **Precisely:** compose a ten from ones and then a hundred from tens (including the incoming ten), recording each new unit in its place.

THINK BEFORE YOU ADD (TASKS 1–5)

Five ways to reason before adding: more or less than 400, a claim that only the ones trade (Lena), the answer that makes sense (each wrong one drops a trade), which hundreds, and a claim that 9 tens never trade (Theo: the new ten makes 10). Ask for reasons, not sums.

BEFORE THIS LESSON

One trade at a time, ones (B20) and tens (B21). **Quick check:** "247 + 126 and 273 + 154: which place trades in each?"

MATERIALS

Base-ten flats, rods and cubes; a place value mat. Drawings on the page use the same pieces: a flat is 10 rods, a rod is 10 cubes.

LAUNCH (TASKS 6–7)

Students decide which sum needs two trades *without adding*. In task 7, 356 + 172 trades only in the tens: a good trap for students who just look for big digits. Listen for "the 1 from the ones can push the tens over 9".

TEACH (TASK 8)

Build 268 and 157 on a mat. Join: 3 hundreds, 11 tens, 15 ones. Trade 10 ones for a ten *first* (the chart's "trade 1" row), then count the tens again: 12. Trade 10 tens for a hundred ("trade 2"). After each trade ask: *"Is it still the same amount?"* Then connect each step to the column: the small 1 in the tens column is the new ten; the one in the hundreds is the new hundred.

ABOUT THE SMALL 1S

The page writes each new unit just above the line in the place it moves to ("new groups below", recommended in the Common Core progression for place value: it keeps the teen total together, 1 and 5, and the 1 is added last). Many classes write it above the top number instead; both are correct if the 1 is in the right column and is added in.

Two Trades in One Sum: teaching notes (continued)

GUIDED AND PRACTICE (TASKS 9–10)

Task 9 walks two sums one place at a time. Task 10: six sums mixed on purpose: ones only (248 + 136), tens only (273 + 154), both, no trade, a zero in the tens (395 + 207: the incoming ten makes exactly 10 tens) and unequal lengths (405 + 95). Ticking the trades first makes students look at the numbers before computing.

MISCONCEPTIONS AND RESPONSES

- **Forgets the incoming ten** (476 + 358 = 824). Ask: "Where is the ten you made from 14 ones?" Have them point to it in the drawing.
- **Misaligns a two-digit number** (385 + 46 = 845). Ask what the 4 in 46 is worth, then line up ones under ones.
- **Writes 12 in one column** (3125 for 268 + 157 style answers). Return to the chart: "Can a place hold 12?"
- **Puts the 1 in the wrong column.** Ask what the 1 is: a ten or a hundred?

WHAT TO LOOK FOR

Secure: correct sums on the mixed set, correct ticks, and an explanation that names "10 tens = 1 hundred". Developing: correct sums but ticks wrong for 395 + 207 or 405 + 95. Needs support: forgets incoming units.

SUPPORT AND EXTENSION

Support: do task 10 with blocks; use only the first four sums (one of each trade pattern).
Extension: "Find two 3-digit numbers whose sum is exactly 1,000 where every column trades." (568 + 432; any pair whose ones add to 10 and other places to 9.)

STANDARDS

Set	Direct	Supporting
Common Core	2.NBT.B.7; 2.NBT.B.9 (task 11 and the error tasks); 3.NBT.A.2	
NC 2017 (current)	NC.2.NBT.7; NC.3.NBT.2	NC.2.NBT.1
NC 2026 (adopted; from 2028–29)	2.ANR.7.2; 2.ANR.7.3; 3.ANR.2.2; 3.ANR.2.3	
Florida B.E.S.T.	MA.2.NSO.2.4 (Grade 2 "explore"); MA.3.NSO.2.1	
Texas TEKS	3.4(A)	2.4(C) (Grade 2 works within 1,000 in problems)

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