Think Before You Add

GOAL Decide what *a* sum will be close to before you add, and explain how you know.

1 More or less?

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

How do you know?

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.

3 Which answer makes sense?

437 + 148 = ☐ 575 ☐ 585 ☐ 5715

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

4 Which hundreds?

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

How do you know?

5 Is Omar correct?

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

Is Omar correct? ☐ yes ☐ no Explain why.

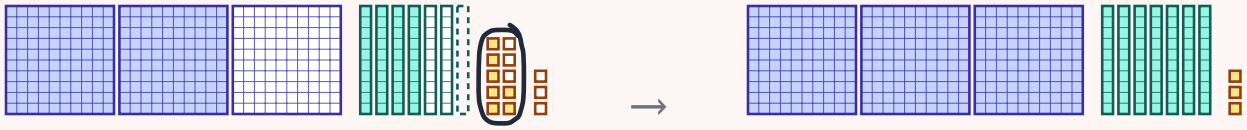
Trade 10 Ones for 1 Ten

GOAL Trade 10 ones for 1 ten when you add, and explain why the new ten goes in the tens.

6 Watch the trade

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

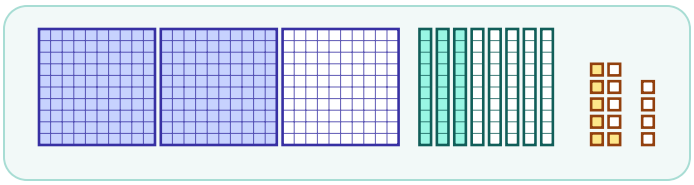
	Hundreds	Tens	Ones
joined	3	6	13
traded	3	7	3

	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

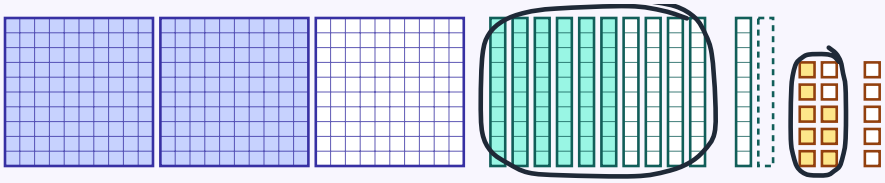
Which sum needs **two** trades? ☐ **356 + 172** ☐ **437 + 285**

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
2	4	8
+ 1	3	6
☐	☐	

273 + 154

Trades:
☐ ones ☐ tens ☐ none

H	T	O
2	7	3
+ 1	5	4
☐	☐	

386 + 247

Trades:
☐ ones ☐ tens ☐ none

H	T	O
3	8	6
+ 2	4	7
☐	☐	

214 + 123

Trades:
☐ ones ☐ tens ☐ none

H	T	O
2	1	4
+ 1	2	3
☐	☐	

395 + 207

Trades:
☐ ones ☐ tens ☐ none

H	T	O
3	9	5
+ 2	0	7
☐	☐	

405 + 95

Trades:
☐ ones ☐ tens ☐ none

H	T	O
4	0	5
+	9	5
☐	☐	

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

GOAL Decide which hundred a sum will be in, and whether a zero makes sense, before you add.

1 Which hundreds?

395 + 8 Will the sum be in the 300s or the 400s? ☐ 300s ☐ 400s

How do you know?

2 Is Ravi correct?

Ravi says: Two 3-digit numbers can never add up to 1,000.

Is Ravi correct? ☐ yes ☐ no Explain why.

3 Which answer makes sense?

458 + 147 = ☐ 505 ☐ 605 ☐ 5,105

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

4 Which hundreds?

389 + 214 Will the sum be in the 500s or the 600s? ☐ 500s ☐ 600s

How do you know?

5 Is Mia correct?

Mia says: 456 + 248 = 704 must be wrong, because a 0 in the answer means a mistake.

Is Mia correct? ☐ yes ☐ no Explain why.

Cross a Hundred, Reach 1,000

GOAL Add three-digit numbers when the sum crosses into a new hundred or reaches 1,000.

6 Estimate first

675 + 325 is about _____ + _____ = _____

Can two 3-digit numbers make a 4-digit number? _____ Digits in this sum: _____

7 Watch the trades

WORKED EXAMPLE

675 + 325 = 1,000

	Thousands	Hundreds	Tens	Ones
joined	0	9	9	10
trade 1	0	9	10	0
trade 2	0	10	0	0
trade 3	1	0	0	0

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

Each row is one trade: **10** of one place make **1** of the next.

5 + 5 = 10 ones

7 + 2 + 1 = 10 tens

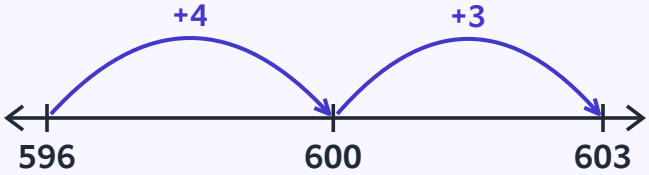
6 + 3 + 1 = 10 hundreds



10 hundreds = **1 thousand**. 0 hundreds, 0 tens, 0 ones are left: 1,000.

8 Jump to the next hundred

WORKED EXAMPLE



not to scale

596 + 7 = 603. Jump 4 to reach 600, then the other 3. The sum moves into the next hundred.

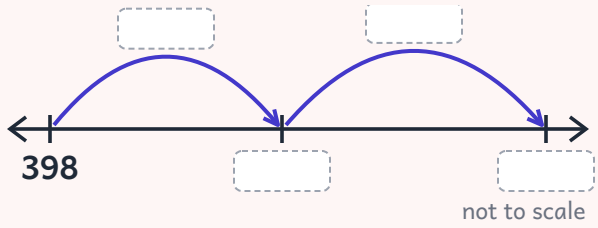
Estimate, Then Add

GOAL Jump to the next hundred, then estimate and add.

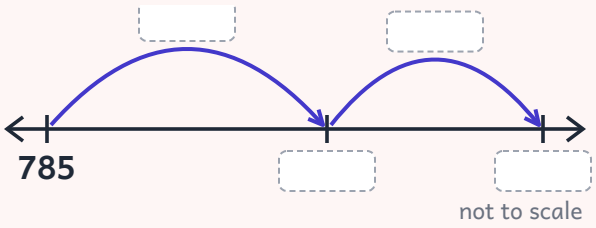
9 Your turn: jump to the next hundred

Fill in the jumps and the numbers you land on.

398 + 6 = _____



785 + 18 = _____



10 Estimate, then add

Round each number to the nearest hundred to estimate. Then add, writing each new ten or hundred in its box.

456 + 247

About _____

	Th	H	T	O
		4	5	6
+		2	4	7

530 + 270

About _____

	Th	H	T	O
		5	3	0
+		2	7	0

253 + 147

About _____

	Th	H	T	O
		2	5	3
+		1	4	7

745 + 255

About _____

	Th	H	T	O
		7	4	5
+		2	5	5

628 + 351

About _____

	Th	H	T	O
		6	2	8
+		3	5	1

394 + 208

About _____

	Th	H	T	O
		3	9	4
+		2	0	8

Zeros, Mistakes and 1,000

GOAL Explain a zero, catch a dropped trade, line up numbers, and make 1,000.

11 Why is there a zero?

	H	T	O
	3	6	8
+	2	3	7
	1	1	
	6	0	5

368 + 237 = 605. Why is there a 0 in the tens place of the sum?

_____

12 Check Zoe's answer

Zoe's work

	H	T	O
	5	8	6
+	2	3	7
	☐	1	
	7	2	3

Sure check: 580 + 230 = _____, and 586 + 237 is more. Is 723 reasonable? _____

What did Zoe forget?

_____

586 + 237 = _____

13 Line up the ones

Write each number in the columns, ones under ones. Then add.

348 + 52

	Th	H	T	O
+		☐	☐	☐

905 + 95

	Th	H	T	O
+		☐	☐	☐

767 + 38

	Th	H	T	O
+		☐	☐	☐

14 Make your own

Find two 3-digit numbers whose sum is **exactly 1,000**, where **every** place trades.

_____ + _____ = 1,000

Think Before You Add

GOAL Decide whether a change keeps the total, and when a friendly number helps.

1 More or less?

299 + 356 Will the sum be more or less than 650? ☐ more ☐ less

How do you know?

2 Is Ella correct?

Ella says: 498 + 237 = 500 + 237, because 498 is close to 500.

Is Ella correct? ☐ yes ☐ no Explain why.

3 Which answer makes sense?

397 + 248 = ☐ 645 ☐ 648 ☐ 651

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

4 Which hundreds?

596 + 299 Will the sum be in the 800s or the 900s? ☐ 800s ☐ 900s

How do you know?

5 Is Noah correct?

Noah says: 523 + 164 needs no friendly numbers. I just add by place.

Is Noah correct? ☐ yes ☐ no Explain why.

Friendly Numbers Keep the Total

GOAL Change three-digit numbers into friendly numbers and keep the total the same.

6 Notice

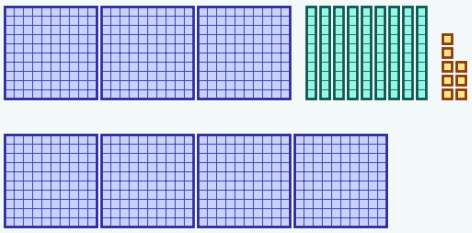
398 + 205 **400 + 203** Which is easier to add in your head?

☐ 398 + 205 ☐ 400 + 203

Do they have the same total? ☐ yes ☐ no How do you know?

7 Give some, take some

WORKED EXAMPLE



398 + 205

400 + 203

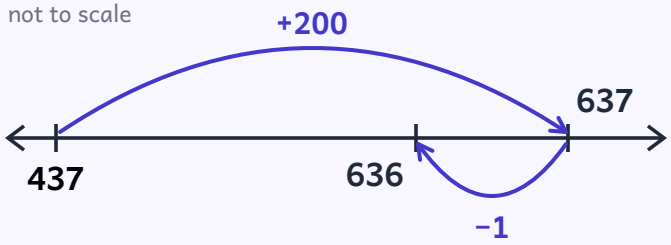
Move **2 ones** from 205 to 398. Now 398 is a full **400**, and 205 is **203**.

398 + 205 = 400 + 203 = 603. One number got 2 more and the other got 2 less, so the total did not change.

8 Add too much, then take it back

WORKED EXAMPLE

not to scale



437 + 199 = 437 + 200 − 1

437 + 200 = 637. We added 1 too many, so take 1 away: **636**.

Is the Total the Same?

GOAL Check whether a change keeps the total, and choose when friendly numbers help.

9 Your turn, with help

299 + 146 = 300 + ☐ = _____

254 + 398 = ☐ + 400 = _____

526 + 297 = 526 + 300 − ☐ = _____

198 + 356 = 200 + ☐ = _____

10 True or false?

Each student changed the numbers to make them friendly. Is the total still the same?

499 + 101 = 500 + 100

☐ true ☐ false

If false, fix the right side: _____

298 + 156 = 300 + 156

☐ true ☐ false

If false, fix the right side: _____

365 + 199 = 365 + 200 − 1

☐ true ☐ false

If false, fix the right side: _____

597 + 248 = 600 + 251

☐ true ☐ false

If false, fix the right side: _____

11 When does it help?

Tick the sums where a friendly number helps. Then find every sum.

199 + 384

☐ helps

= _____

432 + 215

☐ helps

= _____

347 + 298

☐ helps

= _____

513 + 264

☐ helps

= _____

Choose Your Way

GOAL Compare two ways to add, show a jump on a number line, and make your own.

12 Two ways

Lin adds in columns

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

Raj uses a friendly number:

398 + 256 = 400 + ☐ = _____

Do they get the same total? ☐ yes ☐ no

For 398 + 256, which way would you choose? Why?

_____

_____

13 Show it on a number line

Show **345 + 198** by adding 200, then jumping back. Write the numbers you land on.



345 + 198 = _____

14 Make your own

Write a sum of two 3-digit numbers, with a total of 1,000 or less, where moving a few ones makes a friendly hundred. Show the friendly numbers and the total.

_____ + _____ = _____ + _____ = _____

15 Check yourself

599 + 236 = _____

Friendly: 600 + ☐

450 + 298 = _____

Friendly: 450 + 300 − ☐

421 + 356 = _____

Would a friendly number help? ____

Think Before You Solve

GOAL Decide what a story is asking and what a sensible answer is before you solve.

1 More or less?

Two classes read 368 and 254 pages. More or less than 600 pages? ☐ more ☐ less

How do you know?

2 Is Sam correct?

Sam says: There were 512 people at a game after 238 more came in. To find how many came first, add 512 + 238.

Is Sam correct? ☐ yes ☐ no Explain why.

3 Which answer makes sense?

A school has 386 boys and 409 girls. How many students are there?

☐ 23 ☐ 785 ☐ 795

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

4 Which hundreds?

A bakery made 275 rolls and 418 muffins. How many did it make in all?

Will the answer be in the 600s or the 700s? ☐ 600s ☐ 700s

How do you know?

5 Which equation matches?

Some cars were in a parking lot. Then 126 more cars came. Now there are 450 cars.

☐ **___ + 126 = 450** ☐ **450 + 126 = ___**

Tick the equation that matches. How do you know?

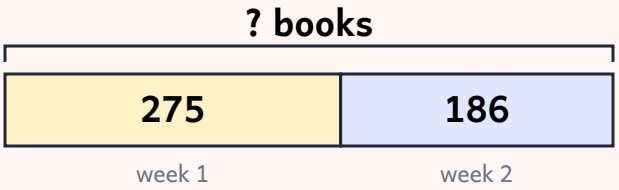
Three-Digit Addition in Stories

GOAL Show a story with a bar model and an equation, then solve it.

6 Read, draw, write, solve

WORKED EXAMPLE

A school collected **275** books in the first week and **186** books in the second week. How many books did it collect in all?



Equation: 275 + 186 = ___
Solve: 275 + 186 = 461
Check: about 280 + 190 = 470, close to 461.
Answer: 461 books

The bar shows two parts and the whole. The **?** marks what we need to find.

7 Your turn

Draw a bar model. Write an equation with ___ for the unknown. Solve.

A food bank had 345 cans. Then people gave 268 more cans. How many cans does it have now?

Draw a bar model.

Equation: _____

Answer: _____ cans

Show your work.

Find the Unknown Part

GOAL Solve stories where the unknown is a part, and use a table.

8 The unknown can be a part

In these stories we know the whole. Draw a bar model, put **?** where the unknown part goes, write an equation with ___, and solve.

a. A farm stand had 175 pumpkins in the morning. The farmer brought more. Now there are 620 pumpkins. How many did the farmer bring?

Draw a bar model.

Equation: _____

Answer: _____ pumpkins

b. Some books were on a cart. Then 128 more were put on it. Now there are 343 books on the cart. How many were on it at first?

Draw a bar model.

Equation: _____

Answer: _____ books

9 Use the table. Use a letter for each unknown.

Day	Books returned
Monday	245
Tuesday	175
Wednesday	80
Thursday	312

a. How many books were returned on Monday, Tuesday and Wednesday together?

Equation: _____ Answer: _____ books

b. How many were returned in all four days?

Equation: _____ Answer: _____ books

Extra Numbers and Good Sense

GOAL Ignore numbers you do not need, check that an answer makes sense, and write your own story.

10 Only what you need

Ms. Lee's class read **156** pages on Monday and **238** pages on Tuesday. There are **24** students in the class. How many pages did the class read on the two days?

Answer: _____ pages Which number did you not need? _____ Why not?

Show your work.

11 Does it make sense?

Jay says the school has **533** chairs: 386 in the classrooms and 247 in the hall. Estimate. Is Jay's total sensible?

About _____ + _____ = _____. Is 533 sensible? _____ The real total is _____ chairs.

Show your work.

12 Write your own story

Write a story that matches **348 + 257 = ___**. Then solve it.

Answer: _____

Think Before You Add

GOAL Decide what a sum will be close to before you add, and explain how you know.

1 More or less?

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

How do you know?

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.

3 Which answer makes sense?

437 + 148 = ☐ 575 ☐ 585 ☐ 5715

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

4 Which hundreds?

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

How do you know?

5 Is Omar correct?

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

Is Omar correct? ☐ yes ☐ no Explain why.

Trade 10 Ones for 1 Ten

GOAL Trade 10 ones for 1 ten when you add, and explain why the new ten goes in the tens.

6 Watch the trade

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

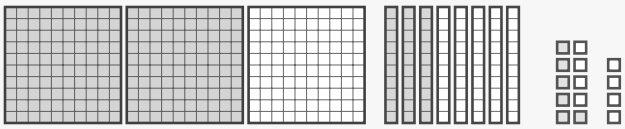
	Hundreds	Tens	Ones
joined	3	6	13
traded	3	7	3

	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*

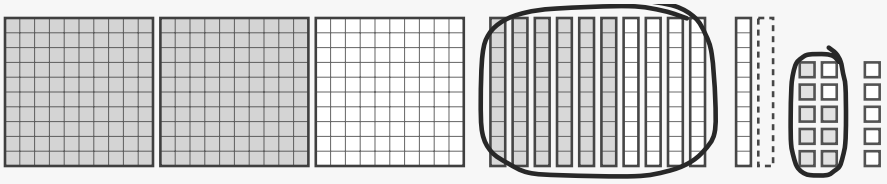
Which sum needs **two** trades? ☐ **356 + 172** ☐ **437 + 285**

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
2	4	8
+ 1	3	6
☐	☐	

273 + 154

Trades:
☐ ones ☐ tens ☐ none

H	T	O
2	7	3
+ 1	5	4
☐	☐	

386 + 247

Trades:
☐ ones ☐ tens ☐ none

H	T	O
3	8	6
+ 2	4	7
☐	☐	

214 + 123

Trades:
☐ ones ☐ tens ☐ none

H	T	O
2	1	4
+ 1	2	3
☐	☐	

395 + 207

Trades:
☐ ones ☐ tens ☐ none

H	T	O
3	9	5
+ 2	0	7
☐	☐	

405 + 95

Trades:
☐ ones ☐ tens ☐ none

H	T	O
4	0	5
+	9	5
☐	☐	

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

GOAL Decide which hundred a sum will be in, and whether a zero makes sense, before you add.

1 Which hundreds?

395 + 8 Will the sum be in the 300s or the 400s? ☐ 300s ☐ 400s

How do you know?

2 Is Ravi correct?

Ravi says: Two 3-digit numbers can never add up to 1,000.

Is Ravi correct? ☐ yes ☐ no Explain why.

3 Which answer makes sense?

458 + 147 = ☐ 505 ☐ 605 ☐ 5,105

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

4 Which hundreds?

389 + 214 Will the sum be in the 500s or the 600s? ☐ 500s ☐ 600s

How do you know?

5 Is Mia correct?

Mia says: 456 + 248 = 704 must be wrong, because a 0 in the answer means a mistake.

Is Mia correct? ☐ yes ☐ no Explain why.

Cross a Hundred, Reach 1,000

GOAL Add three-digit numbers when the sum crosses into a new hundred or reaches 1,000.

6 Estimate first

675 + 325 is about _____ + _____ = _____

Can two 3-digit numbers make a 4-digit number? _____ Digits in this sum: _____

7 Watch the trades

WORKED EXAMPLE

675 + 325 = 1,000

	Thousands	Hundreds	Tens	Ones
joined	0	9	9	10
trade 1	0	9	10	0
trade 2	0	10	0	0
trade 3	1	0	0	0

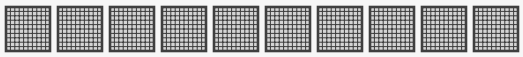
	Th	H	T	O
		6	7	5
+		3	2	5
	1	1	1	
	1	0	0	0

Each row is one trade: **10** of one place make **1** of the next.

5 + 5 = 10 ones

7 + 2 + 1 = 10 tens

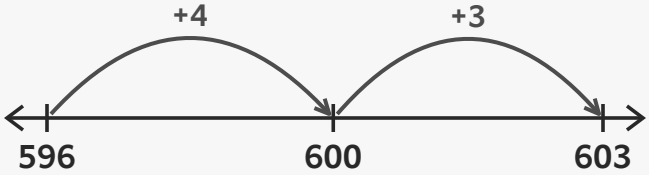
6 + 3 + 1 = 10 hundreds



10 hundreds =  **1 thousand**. 0 hundreds, 0 tens, 0 ones are left: 1,000.

8 Jump to the next hundred

WORKED EXAMPLE



not to scale

596 + 7 = 603. Jump 4 to reach 600, then the other 3. The sum moves into the next hundred.

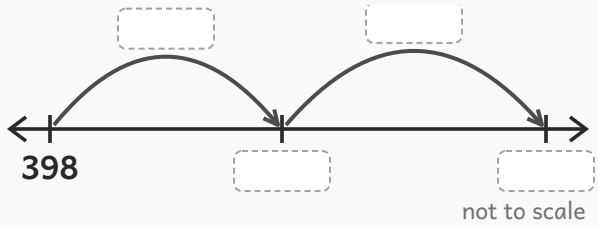
Estimate, Then Add

GOAL Jump to the next hundred, then estimate and add.

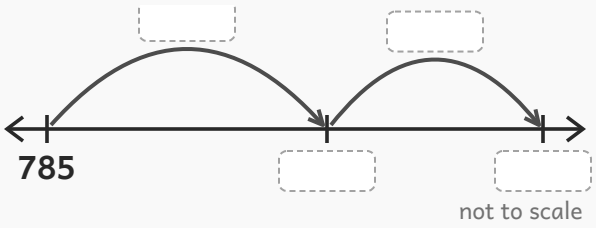
9 Your turn: jump to the next hundred

Fill in the jumps and the numbers you land on.

398 + 6 = _____



785 + 18 = _____



10 Estimate, then add

Round each number to the nearest hundred to estimate. Then add, writing each new ten or hundred in its box.

456 + 247

About _____

	Th	H	T	O
		4	5	6
+		2	4	7

530 + 270

About _____

	Th	H	T	O
		5	3	0
+		2	7	0

253 + 147

About _____

	Th	H	T	O
		2	5	3
+		1	4	7

745 + 255

About _____

	Th	H	T	O
		7	4	5
+		2	5	5

628 + 351

About _____

	Th	H	T	O
		6	2	8
+		3	5	1

394 + 208

About _____

	Th	H	T	O
		3	9	4
+		2	0	8

Zeros, Mistakes and 1,000

GOAL Explain a zero, catch a dropped trade, line up numbers, and make 1,000.

11 Why is there a zero?

H	T	O
	3	6	8
+	2	3	7
	1	1	
	6	0	5

368 + 237 = 605. Why is there a 0 in the tens place of the sum?

12 Check Zoe's answer

Zoe's work

H	T	O
	5	8	6
+	2	3	7
	☐	1	
	7	2	3

Sure check: 580 + 230 = _____, and 586 + 237 is more. Is 723 reasonable? _____

What did Zoe forget?

586 + 237 = _____

13 Line up the ones

Write each number in the columns, ones under ones. Then add.

348 + 52

Th	H	T	O
+		☐	☐	☐

905 + 95

Th	H	T	O
+		☐	☐	☐

767 + 38

Th	H	T	O
+		☐	☐	☐

14 Make your own

Find two 3-digit numbers whose sum is **exactly 1,000**, where **every** place trades.

_____ + _____ = 1,000

Think Before You Add

GOAL Decide whether a change keeps the total, and when a friendly number helps.

1 More or less?

299 + 356 Will the sum be more or less than 650? ☐ more ☐ less

How do you know?

2 Is Ella correct?

Ella says: 498 + 237 = 500 + 237, because 498 is close to 500.

Is Ella correct? ☐ yes ☐ no Explain why.

3 Which answer makes sense?

397 + 248 = ☐ 645 ☐ 648 ☐ 651

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

4 Which hundreds?

596 + 299 Will the sum be in the 800s or the 900s? ☐ 800s ☐ 900s

How do you know?

5 Is Noah correct?

Noah says: 523 + 164 needs no friendly numbers. I just add by place.

Is Noah correct? ☐ yes ☐ no Explain why.

Friendly Numbers Keep the Total

GOAL Change three-digit numbers into friendly numbers and keep the total the same.

6 Notice

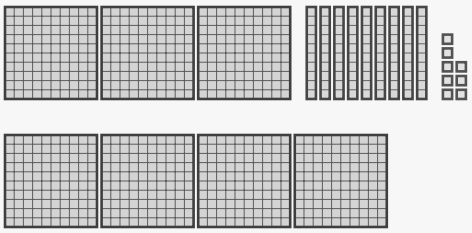
398 + 205 **400 + 203** Which is easier to add in your head?

☐ 398 + 205 ☐ 400 + 203

Do they have the same total? ☐ yes ☐ no How do you know?

7 Give some, take some

WORKED EXAMPLE



398 + 205

400 + 203

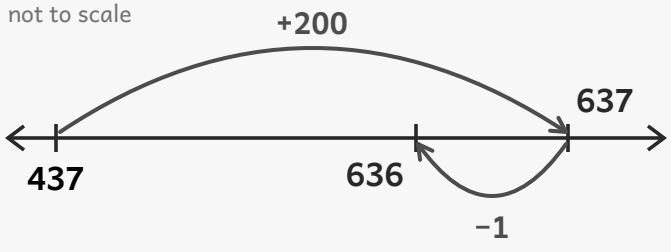
Move **2 ones** from 205 to 398. Now 398 is a full **400**, and 205 is **203**.

398 + 205 = 400 + 203 = 603. One number got 2 more and the other got 2 less, so the total did not change.

8 Add too much, then take it back

WORKED EXAMPLE

not to scale



437 + 199 = 437 + 200 − 1

437 + 200 = 637. We added 1 too many, so take 1 away: **636**.

Is the Total the Same?

GOAL Check whether a change keeps the total, and choose when friendly numbers help.

9 Your turn, with help

299 + 146 = 300 + ☐ = ____

254 + 398 = ☐ + 400 = ____

526 + 297 = 526 + 300 − ☐ = ____

198 + 356 = 200 + ☐ = ____

10 True or false?

Each student changed the numbers to make them friendly. Is the total still the same?

499 + 101 = 500 + 100

☐ true ☐ false

If false, fix the right side: _____

298 + 156 = 300 + 156

☐ true ☐ false

If false, fix the right side: _____

365 + 199 = 365 + 200 − 1

☐ true ☐ false

If false, fix the right side: _____

597 + 248 = 600 + 251

☐ true ☐ false

If false, fix the right side: _____

11 When does it help?

Tick the sums where a friendly number helps. Then find every sum.

199 + 384

☐ helps

= _____

432 + 215

☐ helps

= _____

347 + 298

☐ helps

= _____

513 + 264

☐ helps

= _____

Choose Your Way

GOAL Compare two ways to add, show a jump on a number line, and make your own.

12 Two ways

Lin adds in columns

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

Raj uses a friendly number:

398 + 256 = 400 + ☐ = _____

Do they get the same total? ☐ yes ☐ no

For 398 + 256, which way would you choose? Why?

_____

_____

13 Show it on a number line

Show **345 + 198** by adding 200, then jumping back. Write the numbers you land on.



345 + 198 = _____

14 Make your own

Write a sum of two 3-digit numbers, with a total of 1,000 or less, where moving a few ones makes a friendly hundred. Show the friendly numbers and the total.

_____ + _____ = _____ + _____ = _____

15 Check yourself

599 + 236 = _____

Friendly: 600 + ☐

450 + 298 = _____

Friendly: 450 + 300 − ☐

421 + 356 = _____

Would a friendly number help? ____

Think Before You Solve

GOAL Decide what a story is asking and what a sensible answer is before you solve.

1 More or less?

Two classes read 368 and 254 pages. More or less than 600 pages? ☐ more ☐ less

How do you know?

2 Is Sam correct?

Sam says: There were 512 people at a game after 238 more came in. To find how many came first, add 512 + 238.

Is Sam correct? ☐ yes ☐ no Explain why.

3 Which answer makes sense?

A school has 386 boys and 409 girls. How many students are there?

☐ 23 ☐ 785 ☐ 795

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

4 Which hundreds?

A bakery made 275 rolls and 418 muffins. How many did it make in all?

Will the answer be in the 600s or the 700s? ☐ 600s ☐ 700s

How do you know?

5 Which equation matches?

Some cars were in a parking lot. Then 126 more cars came. Now there are 450 cars.

☐ **___ + 126 = 450** ☐ **450 + 126 = ___**

Tick the equation that matches. How do you know?

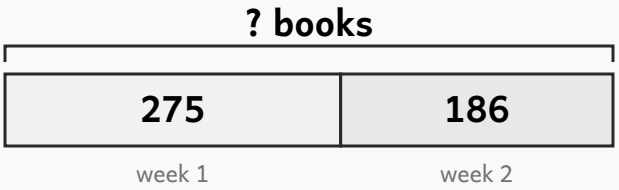
Three-Digit Addition in Stories

GOAL Show a story with a bar model and an equation, then solve it.

6 Read, draw, write, solve

WORKED EXAMPLE

A school collected **275** books in the first week and **186** books in the second week. How many books did it collect in all?



Equation: 275 + 186 = ___
Solve: 275 + 186 = 461
Check: about 280 + 190 = 470, close to 461.
Answer: 461 books

The bar shows two parts and the whole. The **?** marks what we need to find.

7 Your turn

Draw a bar model. Write an equation with ___ for the unknown. Solve.

A food bank had 345 cans. Then people gave 268 more cans. How many cans does it have now?

Draw a bar model.

Equation: _____

Answer: _____ cans

Show your work.

Find the Unknown Part

GOAL Solve stories where the unknown is a part, and use a table.

8 The unknown can be a part

In these stories we know the whole. Draw a bar model, put **?** where the unknown part goes, write an equation with ___, and solve.

a. A farm stand had 175 pumpkins in the morning. The farmer brought more. Now there are 620 pumpkins. How many did the farmer bring?

Draw a bar model.

Equation: _____

Answer: _____ pumpkins

b. Some books were on a cart. Then 128 more were put on it. Now there are 343 books on the cart. How many were on it at first?

Draw a bar model.

Equation: _____

Answer: _____ books

9 Use the table. Use a letter for each unknown.

Day	Books returned
Monday	245
Tuesday	175
Wednesday	80
Thursday	312

a. How many books were returned on Monday, Tuesday and Wednesday together?

Equation: _____ Answer: _____ books

b. How many were returned in all four days?

Equation: _____ Answer: _____ books

Extra Numbers and Good Sense

GOAL Ignore numbers you do not need, check that an answer makes sense, and write your own story.

10 Only what you need

Ms. Lee's class read **156** pages on Monday and **238** pages on Tuesday. There are **24** students in the class. How many pages did the class read on the two days?

Answer: _____ pages Which number did you not need? _____ Why not?

Show your work.

11 Does it make sense?

Jay says the school has **533** chairs: 386 in the classrooms and 247 in the hall. Estimate. Is Jay's total sensible?

About _____ + _____ = _____. Is 533 sensible? _____ The real total is _____ chairs.

Show your work.

12 Write your own story

Write a story that matches **348 + 257 = ___**. Then solve it.

Answer: _____

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.

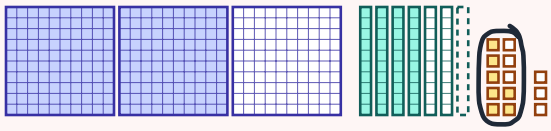
Trade 10 Ones for 1 Ten

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

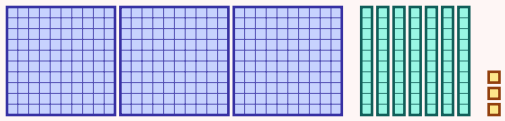
6 Watch the trade

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

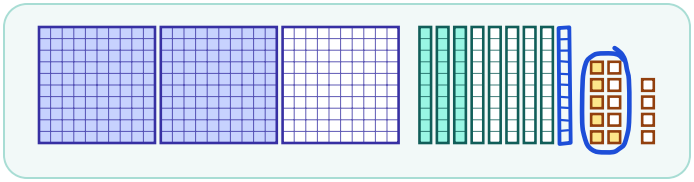
	Hundreds	Tens	Ones
joined	3	6	13
traded	3	7	3

	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.

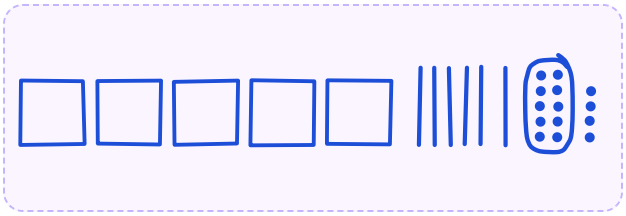


	Hundreds	Tens	Ones
joined	3	8	14
traded	3	9	4

236 + 158 = 394 Do the 9 tens make *a* new hundred? no

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.



	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

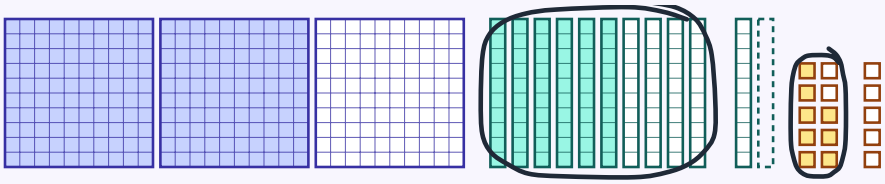
Which sum needs **two** trades? ☐ **356 + 172** ☑ **437 + 285**

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?

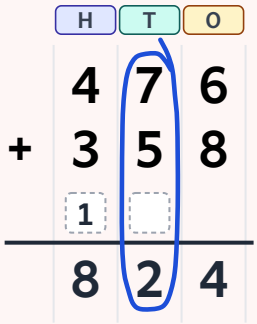
It is the 10 tens we traded: 10 tens = 1 hundred = 100.

Find and Fix

Answers in blue. Task 14 has many right answers.

12 Find Leo's mistake

Leo's work



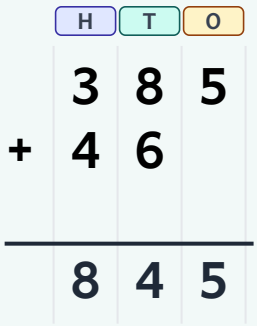
Circle the column where Leo made a mistake. What did he forget?

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.

Think Before You Add

Answers in blue. Accept other clear reasons.

1 Which hundreds?

395 + 8 Will the sum be in the 300s or the 400s? ☐ 300s ☑ 400s

How do you know?

395 + 5 = 400, and 3 more makes 403.

2 Is Ravi correct?

Ravi says: Two 3-digit numbers can never add up to 1,000.

Is Ravi correct? ☐ yes ☑ no Explain why.

No. 600 + 400 = 1,000. 6 hundreds and 4 hundreds make 10 hundreds, which is 1 thousand.

3 Which answer makes sense?

458 + 147 = ☐ 505 ☑ 605 ☐ 5,105

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

505 forgets the new hundred from 10 tens. 5105 writes 10 in the tens place.

4 Which hundreds?

389 + 214 Will the sum be in the 500s or the 600s? ☐ 500s ☑ 600s

How do you know?

300 + 200 = 500, and 89 + 14 = 103, more than 100, so the sum is in the 600s.

5 Is Mia correct?

Mia says: 456 + 248 = 704 must be wrong, because a 0 in the answer means a mistake.

Is Mia correct? ☐ yes ☑ no Explain why.

No. 5 + 4 + 1 = 10 tens trade for a hundred, so no tens are left: the 0 is right.

Cross a Hundred, Reach 1,000

Answers in blue.

6 Estimate first

675 + 325 is about **700** + **300** = **1,000**

Can two 3-digit numbers make a 4-digit number? **yes** Digits in this sum: **4**

7 Watch the trades

WORKED EXAMPLE

675 + 325 = 1,000

	Thousands	Hundreds	Tens	Ones
joined	0	9	9	10
trade 1	0	9	10	0
trade 2	0	10	0	0
trade 3	1	0	0	0

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

Each row is one trade: **10** of one place make **1** of the next.

5 + 5 = 10 ones

7 + 2 + 1 = 10 tens

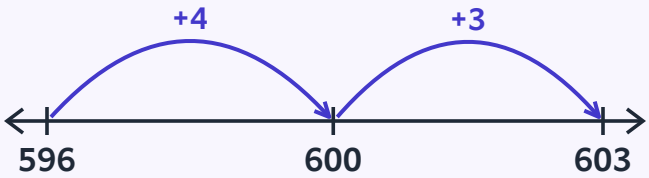
6 + 3 + 1 = 10 hundreds



10 hundreds =  **1 thousand**. 0 hundreds, 0 tens, 0 ones are left: 1,000.

8 Jump to the next hundred

WORKED EXAMPLE



not to scale

596 + 7 = 603. Jump 4 to reach 600, then the other 3. The sum moves into the next hundred.

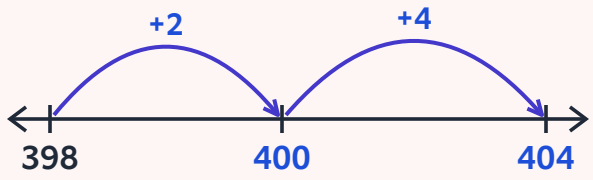
Estimate, Then Add

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

9 Your turn: jump to the next hundred

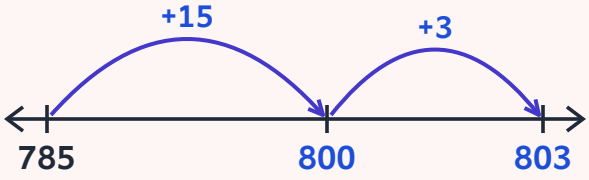
Fill in the jumps and the numbers you land on.

398 + 6 = 404



not to scale

785 + 18 = 803



not to scale

10 Estimate, then add

Round each number to the nearest hundred to estimate. Then add, writing each new ten or hundred in its box.

456 + 247

About 700

	Th	H	T	O
		4	5	6
+		2	4	7
		1	1	
		7	0	3

530 + 270

About 800

	Th	H	T	O
		5	3	0
+		2	7	0
		1		
		8	0	0

253 + 147

About 400

	Th	H	T	O
		2	5	3
+		1	4	7
		1	1	
		4	0	0

745 + 255

About 1,000

	Th	H	T	O
		7	4	5
+		2	5	5
	1	1	1	
	1	0	0	0

628 + 351

About 1,000

	Th	H	T	O
		6	2	8
+		3	5	1
		9	7	9

394 + 208

About 600

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

394 + 208: 9 + 0 + 1 = 10 tens, so the tens trade too: 602. 253 + 147: 10 ones and then 10 tens: 400. 745 + 255: every place trades: 1,000. 628 + 351: no trades.

Zeros, Mistakes and 1,000

Answers in blue. Task 14: accept any pair with ones adding to 10, tens and hundreds to 9.

11 Why is there a zero?

	H	T	O
	3	6	8
+	2	3	7
	1	1	
	6	0	5

368 + 237 = 605. Why is there *a* 0 in the tens place of the sum?

6 + 3 + 1 = 10 tens make 1 hundred, so no tens are left: 0.

12 Check Zoe's answer

Zoe's work

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

Sure check: 580 + 230 = 810, and 586 + 237 is more. Is 723 reasonable? no

What did Zoe forget?

8 + 3 + 1 = 12 tens: she forgot the new hundred.

586 + 237 = 823

13 Line up the ones

Write each number in the columns, ones under ones. Then add.

348 + 52

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

905 + 95

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

767 + 38

	Th	H	T	O
		7	6	7
+			3	8
		1	1	
		8	0	5

14 Make your own

Find two 3-digit numbers whose sum is **exactly 1,000**, where **every** place trades.

638 + 362 = 1,000

Think Before You Add

Answers in blue. Accept other clear reasons.

1 More or less?

299 + 356 Will the sum be more or less than 650? ☑ more ☐ less

How do you know?

300 + 356 = 656, and 299 is 1 less, so the sum is 655: more than 650.

2 Is Ella correct?

Ella says: 498 + 237 = 500 + 237, because 498 is close to 500.

Is Ella correct? ☐ yes ☑ no Explain why.

No. 500 + 237 is 2 too much. Take 2 from 237: 500 + 235.

3 Which answer makes sense?

397 + 248 = ☑ 645 ☐ 648 ☐ 651

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

648 is 400 + 248: it forgets to take back the extra 3. 651 adds 3 more instead of taking 3 away.

4 Which hundreds?

596 + 299 Will the sum be in the 800s or the 900s? ☑ 800s ☐ 900s

How do you know?

600 + 300 = 900, but that is 4 + 1 = 5 too much, so the sum is 895: in the 800s.

5 Is Noah correct?

Noah says: 523 + 164 needs no friendly numbers. I just add by place.

Is Noah correct? ☑ yes ☐ no Explain why.

Yes. No place makes 10 or more, so adding by place is quick: 687.

Friendly Numbers Keep the Total

Answers in blue. Task 6: most students find 400 + 203 easier; accept either choice with a reason.

6 Notice

398 + 205 **400 + 203** Which is easier to add in your head?

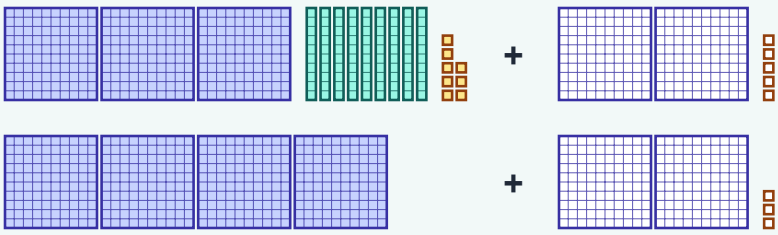
☐ 398 + 205 ☑ 400 + 203

Do they have the same total? ☑ yes ☐ no How do you know?

Both are 603: 2 moved from 205 to 398, so nothing was added or lost.

7 Give some, take some

WORKED EXAMPLE



398 + 205

400 + 203

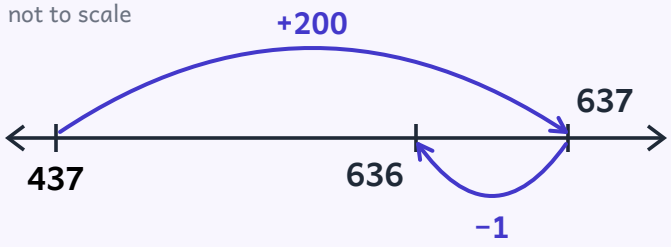
Move **2 ones** from 205 to 398. Now 398 is a full **400**, and 205 is **203**.

398 + 205 = 400 + 203 = 603. One number got 2 more and the other got 2 less, so the total did not change.

8 Add too much, then take it back

WORKED EXAMPLE

not to scale



437 + 199 = 437 + 200 − 1

437 + 200 = 637. We added 1 too many, so take 1 away: **636**.

Is the Total the Same?

Answers in blue. Tasks 10 and 11 have more than one right answer.

9 Your turn, with help

299 + 146 = 300 + [145] = 445

254 + 398 = [252] + 400 = 652

526 + 297 = 526 + 300 − [3] = 823

198 + 356 = 200 + [354] = 554

10 True or false?

Each student changed the numbers to make them friendly. Is the total still the same?

499 + 101 = 500 + 100
☑ true ☐ false
If false, fix the right side: —

298 + 156 = 300 + 156
☐ true ☑ false
If false, fix the right side: 300 + 154

365 + 199 = 365 + 200 − 1
☑ true ☐ false
If false, fix the right side: —

597 + 248 = 600 + 251
☐ true ☑ false
If false, fix the right side: 600 + 245

Sample fixes. Accept any right side worth the same total (454 and 845), for example 300 + 156 − 2 or 600 + 248 − 3.

11 When does it help?

Tick the sums where a friendly number helps. Then find every sum.

199 + 384
☑ helps
= 583

432 + 215
☐ helps
= 647

347 + 298
☑ helps
= 645

513 + 264
☐ helps
= 777

199 + 384 = 200 + 383 and 347 + 298 = 347 + 300 − 2 (or 345 + 300) are good choices. 432 + 215 and 513 + 264 need no trade, so adding hundreds, tens and ones is already easy. Accept other ticks with a sensible reason.

Choose Your Way

Answers in blue. Tasks 12 and 14 have more than one right answer.

12 Two ways

Lin adds in columns

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

Raj uses a friendly number:

398 + 256 = 400 + **254** = **654**

Do they get the same total? ☑ yes ☐ no

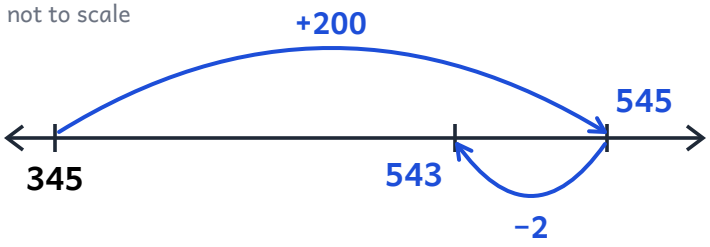
For 398 + 256, which way would you choose? Why?

Either, with a reason. Raj's way: 398 is 2 away from 400, so one easy step. Lin's way needs two trades.

13 Show it on a number line

Show **345 + 198** by adding 200, then jumping back. Write the numbers you land on.

not to scale



345 + 198 = **543**

14 Make your own

Write a sum of two 3-digit numbers, with a total of 1,000 or less, where moving a few ones makes a friendly hundred. Show the friendly numbers and the total.

296 + **135** = **300** + **131** = **431**

One answer. Accept any two 3-digit numbers, total 1,000 or less, where one number is a few ones from a hundred and the other changes the opposite way by the same amount.

15 Check yourself

599 + 236 = 835

Friendly: 600 + **235**

450 + 298 = 748

Friendly: 450 + 300 − **2**

421 + 356 = 777

Would a friendly number help? **no**

421 + 356 has no trades, so adding hundreds, tens and ones is already quick.

Think Before You Solve

Answers in blue. Accept other clear reasons.

1 More or less?

Two classes read 368 and 254 pages. More or less than 600 pages? ☑ more ☐ less

How do you know?

300 + 200 = 500, and 68 + 54 is more than 100: more than 600.

2 Is Sam correct?

Sam says: There were 512 people at a game after 238 more came in. To find how many came first, add 512 + 238.

Is Sam correct? ☐ yes ☑ no Explain why.

No. 512 is the total. The unknown is a part: ___ + 238 = 512, so 274 people were there at first.

3 Which answer makes sense?

A school has 386 boys and 409 girls. How many students are there?

☐ 23 ☐ 785 ☑ 795

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

23 takes away, but the story puts two groups together. 785 forgets the new ten from 15 ones.

4 Which hundreds?

A bakery made 275 rolls and 418 muffins. How many did it make in all?

Will the answer be in the 600s or the 700s? ☑ 600s ☐ 700s

How do you know?

200 + 400 = 600, and 75 + 18 = 93, less than 100: the 600s.

5 Which equation matches?

Some cars were in a parking lot. Then 126 more cars came. Now there are 450 cars.

☑ **___ + 126 = 450** ☐ **450 + 126 = ___**

Tick the equation that matches. How do you know?

450 is the total and 126 is a part; the unknown is the cars at first.

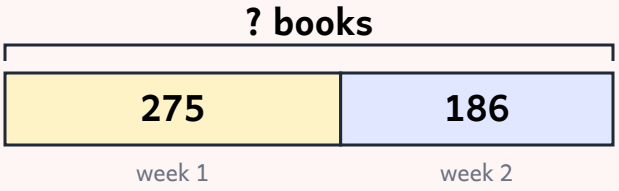
Three-Digit Addition in Stories

Answers in blue. Bar models may be drawn differently if the parts and the whole are right.

6 Read, draw, write, solve

WORKED EXAMPLE

A school collected **275** books in the first week and **186** books in the second week. How many books did it collect in all?



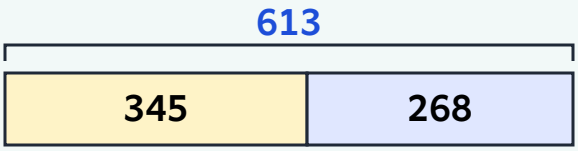
Equation: 275 + 186 = ___
Solve: 275 + 186 = 461
Check: about 280 + 190 = 470, close to 461.
Answer: 461 books

The bar shows two parts and the whole. The **?** marks what we need to find.

7 Your turn

Draw a bar model. Write an equation with ___ for the unknown. Solve.

A food bank had 345 cans. Then people gave 268 more cans. How many cans does it have now?



Equation: 345 + 268 = ___

Answer: 613 cans

Show your work.

One way: 5 + 8 = 13 ones, 4 + 6 + 1 = 11 tens, 3 + 2 + 1 = 6 hundreds: 613.

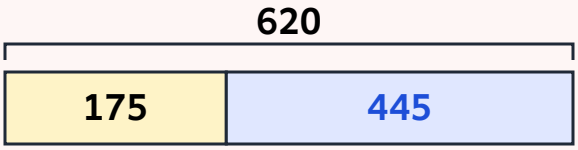
Find the Unknown Part

Answers in blue. Bar models may be drawn differently if the parts and the whole are right.

8 The unknown can be a part

In these stories we know the whole. Draw a bar model, put **?** where the unknown part goes, write an equation with ___, and solve.

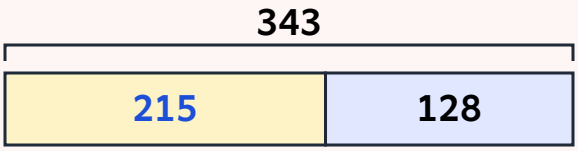
a. A farm stand had 175 pumpkins in the morning. The farmer brought more. Now there are 620 pumpkins. How many did the farmer bring?



Equation: 175 + ___ = 620

Answer: 445 pumpkins

b. Some books were on a cart. Then 128 more were put on it. Now there are 343 books on the cart. How many were on it at first?



Equation: ___ + 128 = 343

Answer: 215 books

Both stories are about adding, so the equations use +. Students may find the unknown by adding on (175 + 25 = 200, then + 420 = 620) or by subtracting (620 − 175); both are correct.

9 Use the table. Use a letter for each unknown.

Day	Books returned
Monday	245
Tuesday	175
Wednesday	80
Thursday	312

a. How many books were returned on Monday, Tuesday and Wednesday together?

Equation: 245 + 175 + 80 = b Answer: 500 books

b. How many were returned in all four days?

Equation: 500 + 312 = t Answer: 812 books

Any letter is fine. Part a: 245 + 175 = 420, + 80 = 500 (or 175 + 80 = 255, + 245 = 500). Part b uses part a: two steps.

Extra Numbers and Good Sense

Answers in blue. Task 12 has many right answers.

10 Only what you need

Ms. Lee's class read **156** pages on Monday and **238** pages on Tuesday. There are **24** students in the class. How many pages did the class read on the two days?

Answer: **394** pages Which number did you not need? **24** Why not?

The question asks about pages, not how many students.

Show your work.

One way: 6 + 8 = 14 ones, 5 + 3 + 1 = 9 tens, 1 + 2 = 3 hundreds: 394.

11 Does it make sense?

Jay says the school has **533** chairs: 386 in the classrooms and 247 in the hall. Estimate. Is Jay's total sensible?

About **390** + **250** = **640**. Is 533 sensible? **no** The real total is **633** chairs.

Accept other sensible estimates, e.g. 400 + 250 = 650. A sure check: 386 + 247 is more than 380 + 240 = 620, so 533 cannot be right. Jay forgot the new hundred from 13 tens.

Show your work.

One way: 6 + 7 = 13 ones, 8 + 4 + 1 = 13 tens, 3 + 2 + 1 = 6 hundreds: 633.

12 Write your own story

Write a story that matches **348 + 257 = ___**. Then solve it.

One answer: A theater sold 348 tickets on Friday and 257 on Saturday. How many tickets in all? 605 tickets.

Answer: **605**

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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Cross a Hundred, Reach 1,000: teaching notes

GOAL

Student goal: add three-digit numbers when the sum crosses into a new hundred or reaches 1,000, and explain a zero in the sum.
Precisely: chained compositions within 1,000 (ones to tens to hundreds, and 10 hundreds to 1 thousand), zeros in addends and sums, numbers of different lengths, and checking with an estimate.

THINK BEFORE YOU ADD (TASKS 1–5)

Five ways to reason before adding: which hundred 395 + 8 lands in, a claim that 1,000 is out of reach (Ravi), the answer that makes sense (505 drops the new hundred), which hundreds, and a claim that a 0 in the sum is a mistake (Mia). Ask for reasons, not sums.

BEFORE THIS LESSON

One trade at a time (B20, B21) and two trades in one sum (B22). **Quick check:** "What is 10 tens? What is 10 hundreds?" "What is 596 + 4?"

WHY THIS IS THE THREE-DIGIT VERSION OF C36

C36 (four digits) is about many trades and a sum with one more digit. With three-digit numbers the same ideas stop at 1,000: Grade 2 and 3 standards are "within 1,000" (NC: "up to and including 1,000"). So this lesson keeps chained trades, zeros, lining up and estimating, and the only four-digit sum is exactly 1,000. The trade ladder of C36 is not needed with three places; blocks and the chart still work.

LAUNCH (TASK 6)

Estimate 675 + 325 before adding: 700 + 300 = 1,000. Ask: "Can two three-digit numbers make a four-digit number?" Many students think 999 is the most they can make.

TEACH (TASKS 7–9)

Walk the chart one row at a time. At each row ask: *"How many did we get? Can this place hold that many? What moves on?"* Show 10 flats becoming a thousand cube. Then the number line: 596 + 7 jumps to 600 first, a bridge students use in their heads.

PRACTICE (TASK 10)

The six sums differ on purpose: a zero in the tens (456 + 247 = 703), the tens alone making a hundred (530 + 270), two zeros (253 + 147 = 400), exactly 1,000, no trades (628 + 351) and a trade through a zero (394 + 208: 9 + 0 + 1 = 10 tens). Estimate first so a wrong hundred stands out.

Cross a Hundred, Reach 1,000: teaching notes (continued)

MISCONCEPTIONS AND RESPONSES

- **Thinks a 0 in the sum means a mistake** (605, 400). Use the chart: 10 tens trade away completely.
- **Thinks 999 is the most** (the brief's misconception). 999 + 1 on the number line; then 675 + 325.
- **Drops a trade when two happen in a row** (Zoe's 723). Use the sure check: more than 580 + 230 = 810.
- **Left-aligns a shorter number** (52 under 34_). Task 13 makes students place each digit; ask what each digit is worth.
- **Writes 10 in one column** (5 10 5 for 368 + 237). "Can a place hold 10?"

WHAT TO LOOK FOR

Secure: correct sums including 400, 602 and 1,000, sensible estimates, and Zoe's error found with the sure check. Developing: correct procedure but no checking. Needs support: dropped trades; return to B21–B22 with blocks.

SUPPORT AND EXTENSION

Support: do task 10 with blocks, starting with 530 + 270 and 628 + 351. Rounding to the nearest hundred is Grade 3 (3.NBT.A.1): in Grade 2, ask "Which hundred is it closest to?" or give the estimates. **Extension (beyond Grade 2–3):** "What is the biggest sum two three-digit numbers can make?" (999 + 999 = 1,998.) "How many pairs make exactly 1,000 with every place trading?" 9 × 10 × 8 = **720**, counting 638 + 362 and 362 + 638 as two (360 as one).

STANDARDS

Set	Direct	Supporting
Common Core	2.NBT.B.7 (sums up to 1,000); 2.NBT.B.9 (explaining a zero); 3.NBT.A.2	2.NBT.A.1a (10 tens make 1 hundred); 3.NBT.A.1 (rounding to estimate)
NC 2017 (current)	NC.2.NBT.7; NC.3.NBT.2 ("up to and including 1,000")	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	3.ANR.6.2 (estimating)
Florida B.E.S.T.	MA.2.NSO.2.4 (Grade 2 "explore", sums up to 1,000); MA.3.NSO.2.1	
Texas TEKS	3.4(A)	3.4(B) (rounding to estimate); 2.4(C)

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Friendly Numbers with Three Digits: teaching notes

GOAL

Student goal: change three-digit numbers into friendly numbers, keep the total the same, and choose when it helps. **Precisely:** compensation that preserves the sum (moving an amount from one addend to the other, or adding a friendly number and taking back the extra), and judging when it is more efficient than adding by place.

THINK BEFORE YOU ADD (TASKS 1–5)

Five ways to reason before adding: more or less than 650 using 300 + 356, a change that adds 2 (Ella), the answer that makes sense (648 forgets to take back, 651 takes back the wrong way), which hundreds, and a sum where friendly numbers are not needed (Noah is right). Ask for reasons, not sums.

BEFORE THIS LESSON

Friendly numbers with two digits (A10), making the next hundred (B23) and three-digit addition with trades (B20–B22). **Quick check:** "What do you add to 398 to make 400? To 596 to make 600?"

MATERIALS

Base-ten blocks and two plates, so ones can visibly move from one number to the other.

TEACH (TASKS 7–8)

Put 398 and 205 on two plates. Move 2 cubes from 205 to 398: the 10 ones make a ten and the 10 tens make a hundred, so 398 becomes 400. Ask: *"Did the total change?"* Then 437 + 199: "What if I add 200 instead? How much too much?" Draw the jump back.

THE IDEA TO PROTECT

Friendly numbers work because **the total is kept the same**. Ask after every example: "How do you know the total is the same?" And not every sum needs it: task 11 and task 12 ask when it helps.

MISCONCEPTIONS AND RESPONSES

- **Changes only one number** (298 + 156 = 300 + 156). Put it on plates: 2 ones appeared from nowhere.
- **Changes both numbers the same way** (597 + 248 = 600 + 251): 6 extra.
- **Forgets to take back the extra** (437 + 199 = 637). "We added 200, but the problem had 199."
- **Thinks a friendly number is always best.** For 432 + 215, adding by place is quick: no trades. Ask which way was quicker for them and why.

Friendly Numbers with Three Digits: teaching notes (continued)

WHAT TO LOOK FOR

Secure: correct true or false choices with fixes, sensible choices in task 11 and a reason in task 12, and a correctly labeled number line in task 13. Developing: correct totals but cannot say why the change is allowed. Needs support: changes one number only.

SUPPORT AND EXTENSION

Support: do task 10 with plates and blocks; start with numbers 1 away from a hundred (499 + 101). **Extension:** "Is 398 + 205 = 393 + 210? Is it 408 + 195?" (Yes, yes.) "Make 697 + 248 friendly two different ways."

ABOUT THE GRADE

Strategies based on place value and properties are named in Grade 2 (2.NBT.B.7, NC.2.NBT.7) and Grade 3 (3.NBT.A.2). Use tasks 6–9 in Grade 2 with blocks; the rest suits both grades.

STANDARDS

Set	Direct	Supporting
Common Core	2.NBT.B.7 (strategies based on place value and properties); 2.NBT.B.9 (explaining why the total stays the same); 3.NBT.A.2	
NC 2017 (current)	NC.2.NBT.7; NC.3.NBT.2	
NC 2026 (adopted; from 2028–29)	2.ANR.7.2; 2.ANR.7.3; 3.ANR.2.2	
Florida B.E.S.T.	MA.2.NSO.2.4 (Grade 2 "explore": properties of operations); MA.3.NSO.2.1	
Texas TEKS	3.4(A) (strategies based on place value and properties)	

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Three-Digit Addition in Stories: teaching notes

GOAL

Students: I can show a story with a bar model and an equation, and solve it.
Precisely: represent additive situations within 1,000 (result unknown, change unknown, start unknown, two steps, extra information) and check that the answer is sensible.

THINK BEFORE YOU SOLVE (TASKS 1–5)

Five ways to think before solving: more or less than 600, a claim that adds the total to a part (Sam), the answer that makes sense (23 subtracts; 785 drops a ten), which hundreds, and which equation matches a start-unknown story. Ask what each number counts.

BEFORE THIS LESSON

Three-digit addition with trades (B20–B26) and bar models with smaller numbers (A13).

TEACH (TASK 6)

Read the story twice. First time: "What is happening?" Second time: "What are the numbers about? What are we finding?" Draw the bar together: two parts and a whole; put ? where the unknown is. Only then write the equation and solve. End with the estimate check.

TASKS 7–8: ONE IDEA, THREE UNKNOWNS

All three stories are about adding to a group; the unknown moves (the result in task 7, the change in 8a, the start in 8b). Insist on an equation with ___ in the place of the unknown (175 + ___ = 620). Students may then add on or subtract to find it: both are correct, and the equation still shows the story.

TASK 9: TWO STEPS

The equations use a letter for the unknown (b, t), as Grade 3 two-step problems ask. Part b can build on part a or add all four days.

AVOID KEY WORDS

Do not teach "more means add" or "in all means add". Story 8b says "more" and the unknown is the start, a part. Ask "Is the unknown a part or the whole?" instead.

Three-Digit Addition in Stories: teaching notes (continued)

MISCONCEPTIONS AND RESPONSES

- **Adds every number it sees** (175 + 620 = 795 in story 8a; adding the 24 students in task 10). Ask what each number counts.
- **Answer without units.** Ask: "461 what?"
- **Accepts an unreasonable total** (Jay's 533). Make the estimate a habit before and after.

WHAT TO LOOK FOR

Secure: correct models with the unknown in the right place, equations that match the story, correct sums and units, and the irrelevant number named. Developing: correct answers with models that do not match. Needs support: adds all numbers.

SUPPORT AND EXTENSION

Support: read stories aloud; give the bar frame with the whole and parts labeled. **Extension:** write a start-unknown story for ___ + 275 = 900 and a two-step story whose answer is 1,000.

ABOUT THE GRADE

Word problems within 1,000 are Grade 3 in Common Core and NC (Grade 2 problems stay within 100); Texas has them in Grade 2 (2.4(C)). Use this page in Grade 2 only where that standard applies.

STANDARDS

Set	Direct	Supporting
Common Core	3.NBT.A.2; 3.OA.D.8 (two-step, task 9)	3.NBT.A.1 (rounding to check); 2.OA.A.1 structures
NC 2017 (current)	NC.3.NBT.2; NC.3.OA.8 (two-step, task 9)	
NC 2026 (adopted; from 2028–29)	3.ANR.2.1; 3.ANR.6.1; 3.ANR.6.2	
Florida B.E.S.T.	MA.3.AR.1.2; MA.3.NSO.2.1	
Texas TEKS	3.4(A); 3.5(A)	2.4(C), 2.4(D)

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