Unit 7

Adding and Subtracting Within 1,000

Essential Questions

- How can we use what we know about place value to add and subtract within 1,000?
- When and how do we compose or decompose a hundred or a ten?
- How can we choose and explain strategies for adding and subtracting within 1,000?

Unit Story: Where Eli Went

You can read the Unit Story with your student by visiting the Unit Story page on the Caregiver Hub.

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Unit Investigation

Lesson 1 is the Unit Investigation. Students determine possible addends that are equal to a given sum to build curiosity and apply their own knowledge in a variety of ways. Use the **Caregiver Connection** to help students continue to explore the math they will see in the unit.

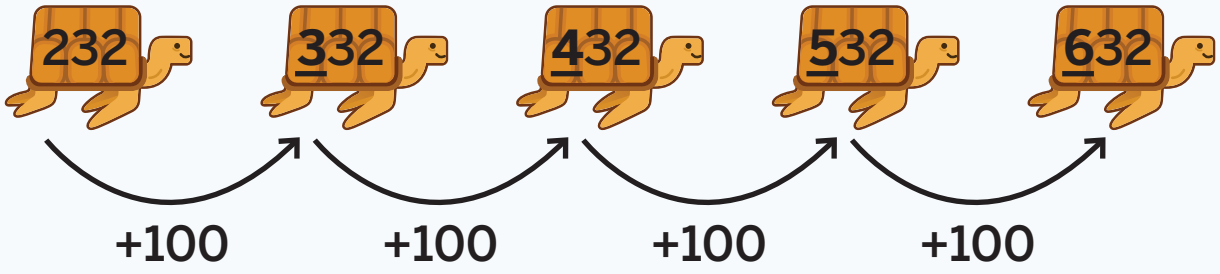
Caregiver Connection

Students may enjoy naming, writing, or adding numbers within 1,000. Consider asking students questions about how they could add large numbers of objects at home, such as craft items (e.g., beads, buttons), coins in piggy banks, small toys, or dried goods in jars (e.g., beans or seeds).

Summary | Lesson 2

You can use what you know about place value and counting on by 10 or 100 to add amounts of tens and hundreds to three-digit numbers.

$$232 + 400 = \underline{632}$$



Try This

For Problems 1 and 2, fill in the number pattern.

1 Count on by 10, starting at 812.

812, _____, _____, _____, _____

2 Count on by 100, starting at 403.

403, _____, _____, _____, _____

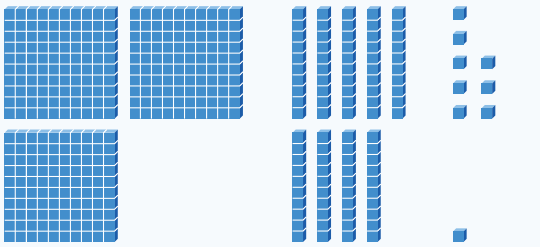
Summary | Lesson 3

When adding numbers within 1,000, you can count on or add by place. When you add by place, add hundreds to hundreds, tens to tens, and ones to ones.

Counting on

258: 358, 368, 378, 388, 398, 399

Adding by place

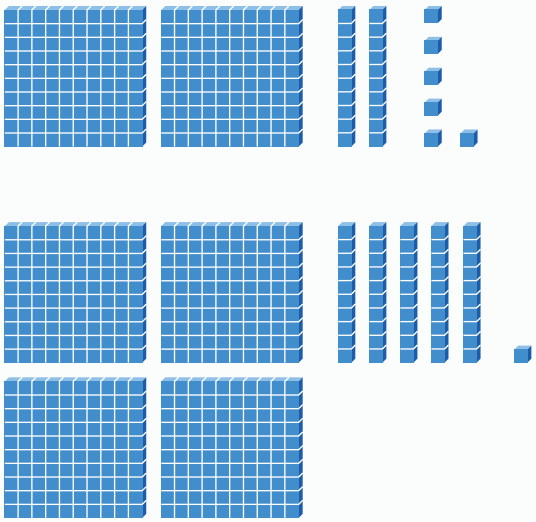


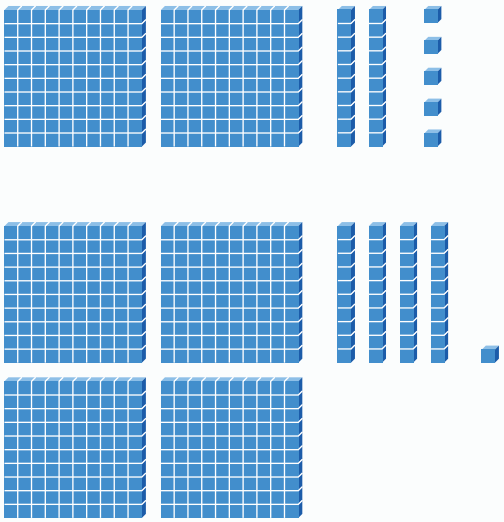
3 hundreds | 9 tens | 9 ones

$$258 + 141 = \underline{399}$$

Try This

1 Circle the base-ten blocks that represent the equation 226 + 451 = 677.

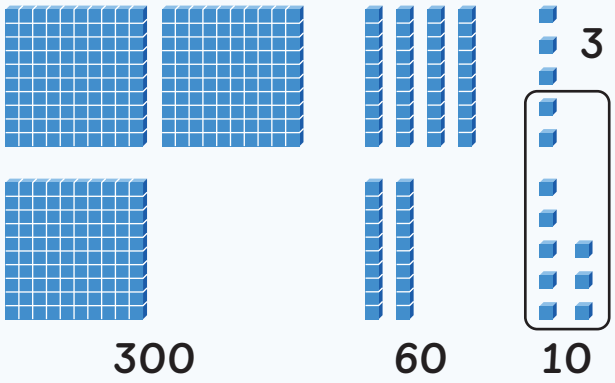




Summary | Lesson 4

When adding by place, you need to compose a ten if there are 10 or more ones. The digit in the ones place of each addend can help you decide if you need to compose a ten.

$$245 + 128 = 373$$



Try This

For Problems 1 and 2, use the addition expression.

$$639 + 129$$

1 Will you need to compose a ten to find the sum? Write *yes* or *no*. _____

2 Find the sum. Use base-ten blocks if it is helpful.

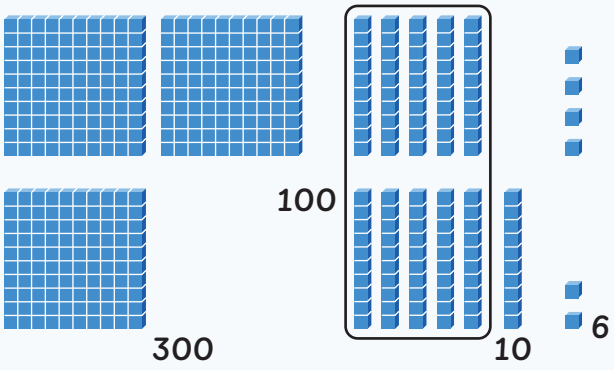
Show or explain your thinking.

answer: _____

Summary | Lesson 5

When adding by place, you need to compose a hundred if there are 10 or more tens. The digit in the tens place of each addend can help you decide if you need to compose a hundred before finding the sum.

$$254 + 162 = 416$$



Try This

For Problems 1 and 2, use the addition expression.

$$397 + 252$$

1 Will you need to compose a hundred to find the sum? Write *yes* or *no*. _____

2 Find the sum of the expression. Use base-ten blocks if it is helpful.

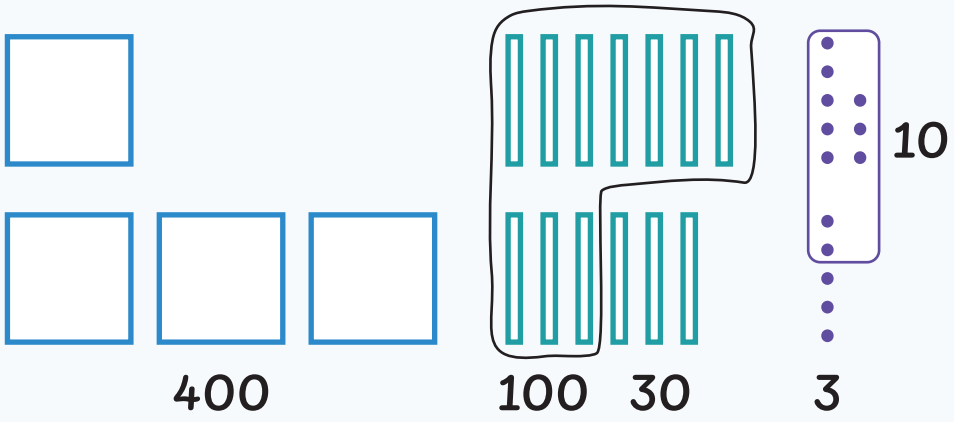
Show or explain your thinking.

answer: _____

Summary | Lesson 6

It is important to consider all place values when adding by place. Sometimes, you need to compose a ten and a hundred to find the sum.

$$178 + 365 = 543$$



Try This

1 Find the sum.

479 + 328

Show your thinking.

answer: _____

Summary | Lesson 7

Equations can be used to represent your thinking when adding within 1,000. When adding by place, the hundreds, tens, and ones can be added in any order.

183 + 248

Adding hundreds first:	Adding ones first:
100 + 200 = 300	3 + 8 = 11
80 + 40 = 120	80 + 40 = 120
3 + 8 = 11	100 + 200 = 300
300 + 120 + 11 = 431	11 + 120 + 300 = 431

Try This

1 Find the sum of 456 + 225. Show your thinking with equations.

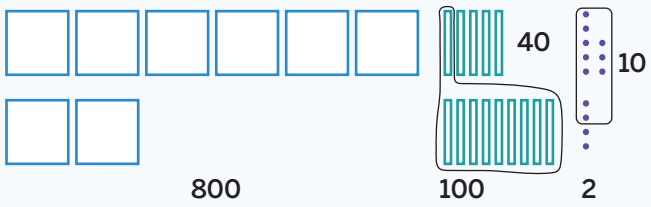
Show your thinking.

answer: _____

Summary | Lesson 8

When adding within 1,000, you can represent your thinking with base-ten diagrams or equations.

658 + 294



800 + 100 + 40 + 10 + 2 = 952

600 + 200 = 800
50 + 90 = 140
8 + 4 = 12

800 + 140 + 12 = 952

Try This

1 Find the sum of 105 + 296.

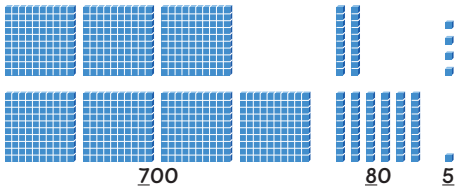
Show or explain your thinking.

answer: _____

In this sub-unit . . .

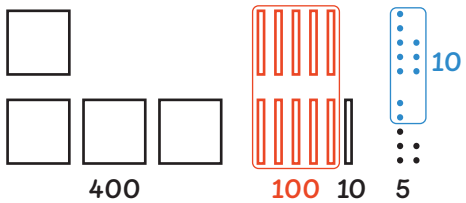
- We noticed that when adding within 1,000 by place, we add hundreds with hundreds, tens with tens, and ones with ones.

324 + 461 = 785



- We saw that when adding within 1,000, sometimes we need to compose a ten, a hundred, or both.

158 + 367 = 525



Math tip: You can figure out if you need to compose by looking at the digits in the tens and ones places of each number before solving.

- We represented strategies for adding within 1,000 with base-ten blocks, base-ten diagrams, and equations.

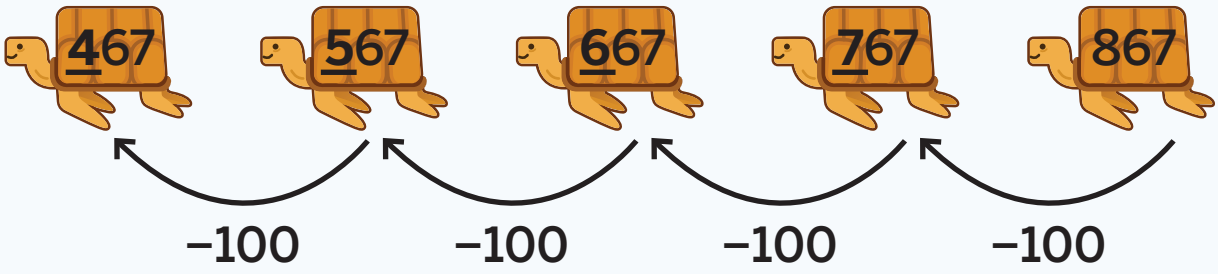
389 + 572 = 961
300 + 500 = 800
80 + 70 = 150
9 + 2 = 11
800 + 150 + 11 = 961

Math tip: You can use your representation to explain why your strategy works.

Summary | Lesson 9

You can use what you know about place value and counting back by 10 or 100 to subtract amounts of tens and hundreds from three-digit numbers.

$$867 - 400 = \underline{467}$$



Try This

For Problems 1 and 2, fill in the number pattern.

1 Count back by 10, starting at 395.

395, _____, _____, _____, _____

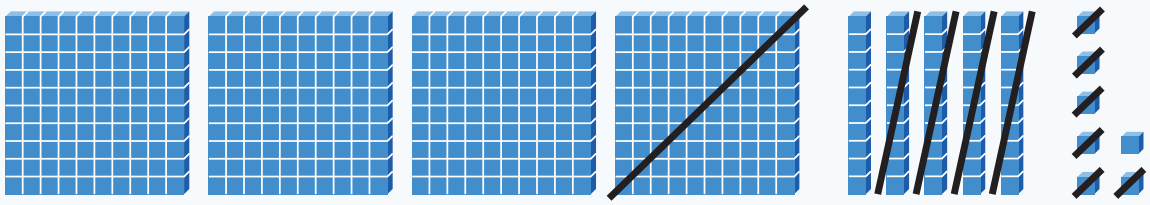
2 Count back by 100, starting at 918.

918, _____, _____, _____, _____

Summary | Lesson 10

When subtracting numbers within 1,000 by place, subtract hundreds from hundreds, tens from tens, and ones from ones.

$$457 - 146 = \underline{311}$$



Try This

1 Find the difference of 768 – 425.

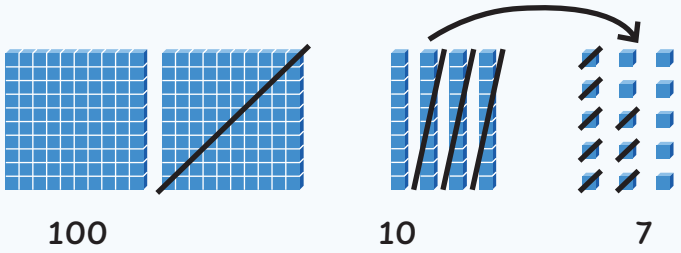
Show or explain your thinking.

answer: _____

Summary | Lesson 11

When subtracting by place, you need to decompose a ten if the amount of ones you are taking away is greater than the amount of ones you have. The digit in the ones place of each number can help you decide if you need to decompose a ten.

$$245 - 128 = 117$$



Try This

For Problems 1 and 2, use the subtraction expression.

$$543 - 129$$

1 Will you need to decompose a ten to find the difference?

Write *yes* or *no*. _____

2 Find the difference. You can use base-ten blocks if it is helpful.

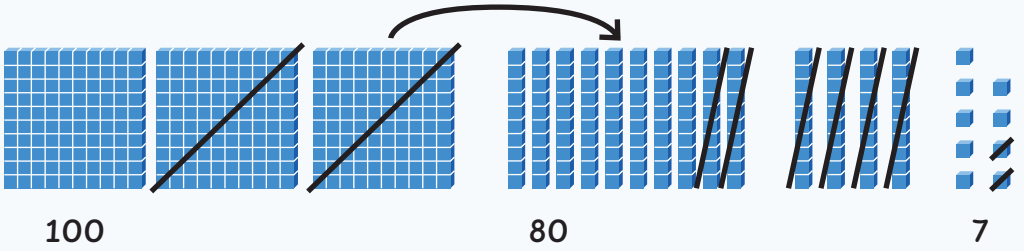
Show or explain your thinking.

answer: _____

Summary | Lesson 12

When subtracting by place, you need to decompose a hundred if the amount of tens you are taking away is greater than the amount of tens you have. The digit in the tens place of each number can help you decide if you need to decompose a hundred.

$$349 - 162 = 187$$



Try This

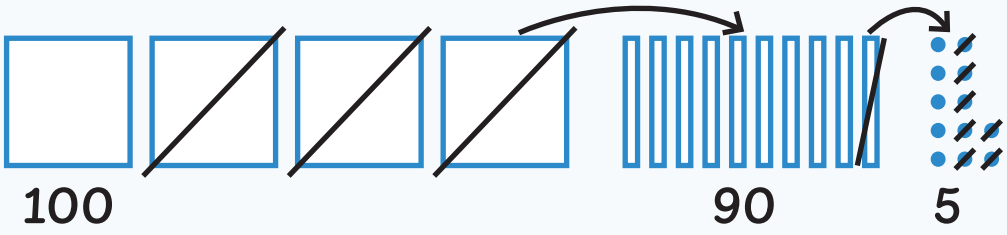
1 Circle **3** expressions in which you need to decompose a hundred.

409 – 118	827 – 362	346 – 215
781 – 674	316 – 204	539 – 473

Summary | Lesson 13

Consider all place values when subtracting by place. Sometimes, you need to decompose a ten and a hundred to find the difference.

$$402 - 207 = 195$$



Try This

1 Find the difference. Draw a base-ten diagram to show your thinking.

763 – 368

Show your thinking.

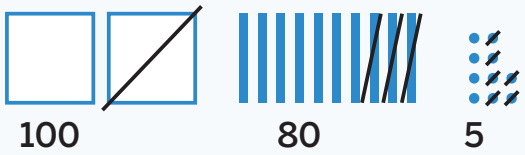
answer: _____

Summary | Lesson 14

You can subtract by place by decomposing before subtracting or decomposing while subtracting.

Decompose before subtracting

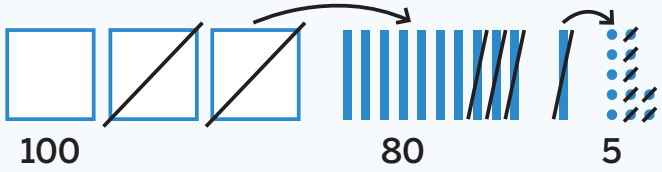
312 – 137



175

Decompose while subtracting

312 – 137



175

Try This

1 Find the difference of 352 – 164.

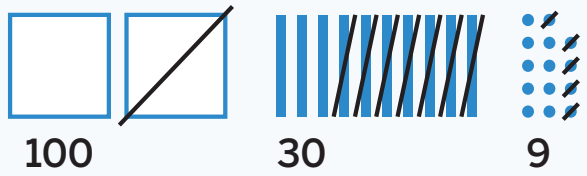
Show or explain your thinking.

answer: _____

Summary | Lesson 15

Base-ten diagrams and equations can be used to show strategies when subtracting by place.

314 – 175



139

$314 = 200 + 100 + 14$

$200 - 100 = 100$

$100 - 70 = 30$

$14 - 5 = 9$

$100 + 30 + 9 = 139$

Try This

1 Find the difference of 612 – 533. Show your thinking using drawings or equations.

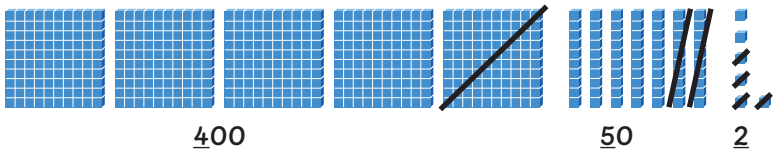
Show your thinking.

answer: _____

In this sub-unit . . .

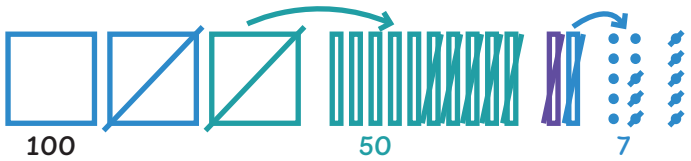
- We noticed that when subtracting within 1,000 by place, we subtract hundreds from hundreds, tens from tens, and ones from ones.

$$576 - 124 = \underline{452}$$



- We saw that when subtracting within 1,000, sometimes, we need to decompose a ten, a hundred, or both.

$$325 - 168 = 157$$



Math tip: You can figure out if you need to decompose by looking at the digits in the tens and ones places of each number before solving.

- We represented strategies for subtracting within 1,000 with base-ten blocks, base-ten diagrams, and equations.

423 − 286 = 137

423 = 300 + 110 + 13

300 − 200 = 100
110 − 80 = 30
13 − 6 = 7
100 + 30 + 7 = 137

Math tip: You can use your representation to explain why your strategy works.

Summary | Lesson 16

When adding up to 4 two-digit numbers, it can be helpful to rearrange the addends. Sometimes, you need to compose more than 1 ten and more than 1 hundred when finding the sum.

$$66 + 88 + 14 + 52 = 220$$

$66 + 14$ $\qquad$ $88 + 52$

$6 + 4 = 10$ $\qquad$ $8 + 2 = 10$ $\qquad$ $80 + 140 = 220$

$60 + 10 + 10 = 80$ $\qquad$ $80 + 50 + 10 = 140$

Try This

1 Find the sum of $97 + 96 + 15 + 34$.

Show your thinking.

answer: _____

Summary | Lesson 17

It can be helpful to think about the addends in an addition problem before choosing a strategy to find the sum. Depending on the addends, one strategy may be more helpful than another.

628 + 299

Adding by place	Changing an addend and adjusting the sum
600 + 200 = 800 20 + 90 = 110 8 + 9 = 17 800 + 110 + 17 = 927	628 + 300 = 928 928 – 1 = 927

Try This

1 Find the sum of 589 + 105.

Show or explain your thinking.

answer: _____

Summary | Lesson 18

It can be helpful to think about the numbers in a subtraction problem before choosing a strategy to find the difference. Depending on the numbers, one strategy may be more helpful than another.

608 – 567

Subtracting by place	Counting up
608 = 500 + 100 + 8 500 – 500 = 0 100 – 60 = 40 8 – 7 = 1 40 + 1 = 41	567 + 3 = 570 570 + 30 = 600 600 + 8 = 608 3 + 30 + 8 = 41

Try This

1 Find the difference of 619 – 593.

Show or explain your thinking.

answer: _____

Summary | Lesson 19

You can use different strategies to make reasonable estimates of sums or differences. Estimating can help you figure out if your answer is reasonable before and after you solve.

374 + 128

Estimate

374 is about 400 and 128 is about 100. 400 + 100 is 500, so I estimate the sum will be about 500.

estimate: about 500

Answer

My answer makes sense because I estimated the sum would have 5 hundreds.

374 + 128 = 502

Try This

1 Estimate the difference of 419 – 226. Explain your thinking.

estimate: _____

In this sub-unit . . .

- We added up to 4 two-digit numbers and saw that, sometimes more than 1 ten and more than 1 hundred need to be composed.

58 + 94 + 42 + 86 = 280

58 + 42
8 + 2 = 10
50 + 40 + 10 = 100

86 + 94
86 + 4 = 90
90 + 90 = 180
100 + 180 = 280

Math tip: It can be helpful to use the **Associative Property of Addition** to find the sum of 4 two-digit numbers.

- We noticed that we can use different strategies to add and subtract within 1,000.

613 + 199 = 812

613 + 200 = 813
813 − 1 = 812

525 − 459 = 66

525 − 25 = 500
500 − 40 = 460
460 − 1 = 459
25 + 40 + 1 = 66

Math tip: It can be helpful to think about the numbers in an addition or subtraction problem before choosing a strategy to solve.

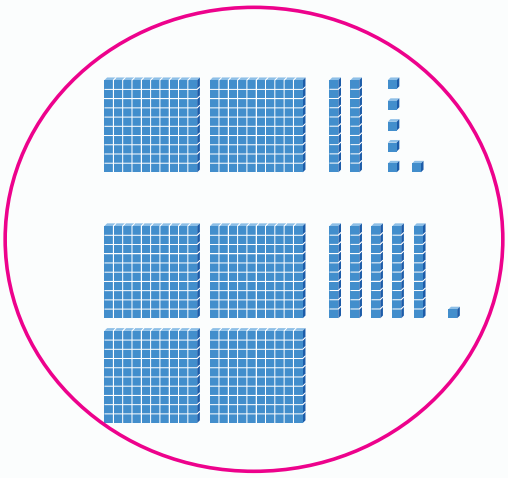
Lesson 2

1 822, 832, 842, 852

2 503, 603, 703, 803

Lesson 3

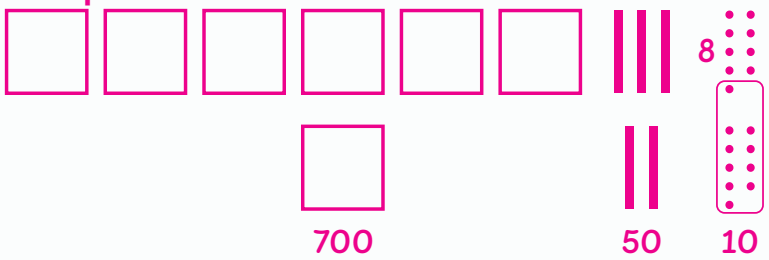
1



Lesson 4

1 yes

2 Sample work shown.

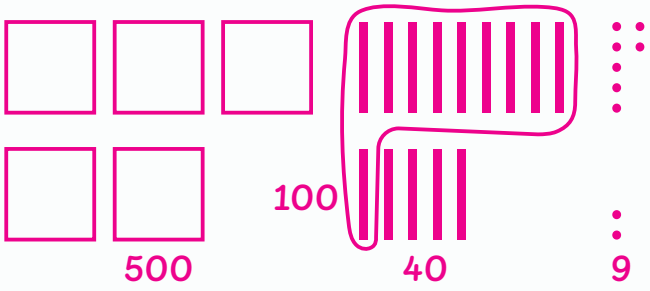


answer: 768

Lesson 5

1 yes

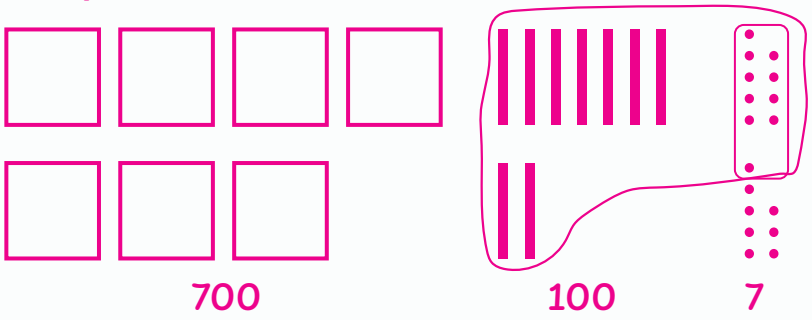
2 Sample work shown.



answer: 649

Lesson 6

1 Sample work shown.



answer: 807

Lesson 7

1 Sample work shown.

$$400 + 200 = 600$$
$$50 + 20 = 70$$
$$6 + 5 = 11$$
$$600 + 70 + 11 = 681$$

answer: 681

Lesson 8

1 Sample work shown.

$$100 + 200 = 300$$
$$0 + 90 = 90$$
$$5 + 6 = 11$$
$$300 + 90 + 11 = 401$$

answer: 401

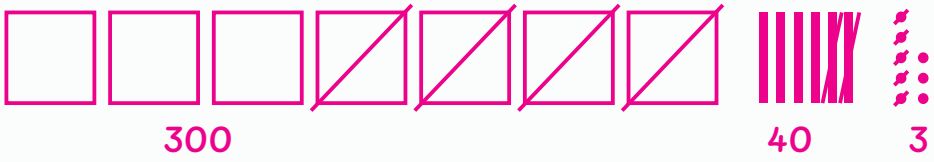
Lesson 9

1 385, 375, 365, 355

2 818, 718, 618, 518

Lesson 10

1 Sample work shown.

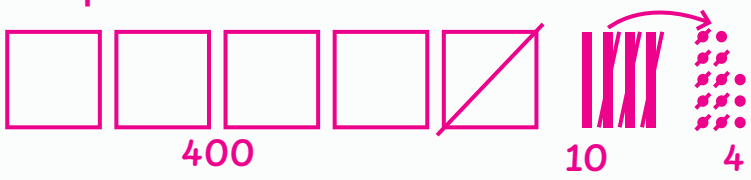


answer: 343

Lesson 11

1 yes

2 Sample work shown.



answer: 414

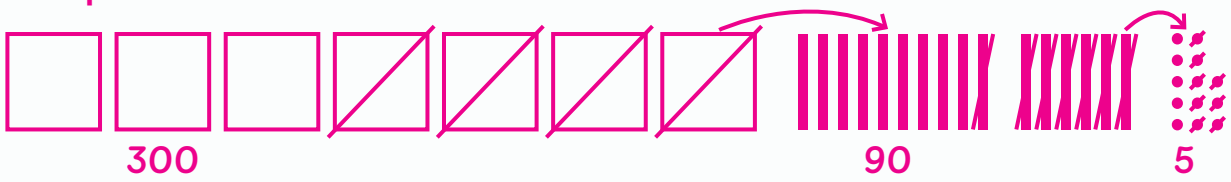
Lesson 12

1

409 – 118	827 – 362	346 – 215
781 – 674	316 – 204	539 – 473

Lesson 13

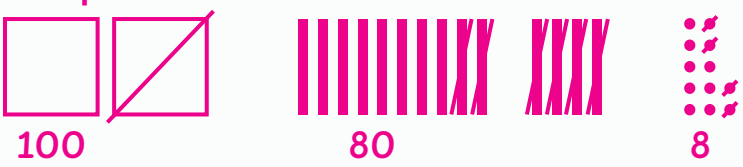
1 Sample work shown



answer: 395

Lesson 14

1 Sample work shown



answer: 188

Lesson 15

1 Sample work shown.

612 = 500 + 100 + 12
500 - 500 = 0
100 - 30 = 70
12 - 3 = 9
0 + 70 + 9 = 79

answer: 79

Lesson 16

1 Sample work shown.

97 + 15
90 + 10 = 100
7 + 5 = 12
100 + 12 = 112

96 + 34
6 + 4 = 10
90 + 10 + 30 = 130

112 + 130 = 242

answer: 242

Lesson 17

1 Sample work shown.

589 + 100 = 689
689 + 5 = 694

answer: 694

Lesson 18

1 Sample work shown.

593 + 7 = 600
600 + 19 = 619
7 + 19 = 26

answer: 26

Lesson 19

1 Sample response shown.

estimate: about 200

I know that 200 and 200 is 400, so 419 – 226 would be close to 200.

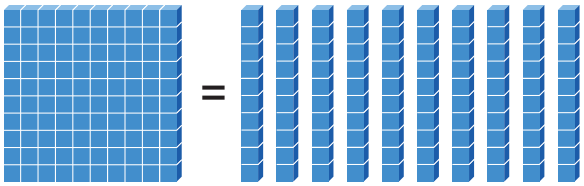
Grade 2 Unit 7 Glossary/2.º grado Unidad 7 Glosario

English

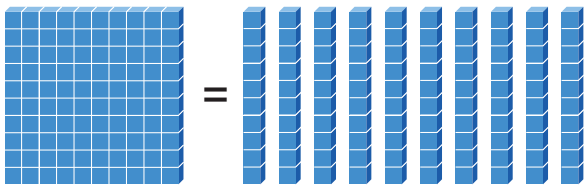
Español

A

a hundred/hundreds A group of 10 tens or 100 ones. The plural of hundred is hundreds.



una centena/centenas Un grupo de 10 decenas o 100 unidades. El plural de centena es centenas.

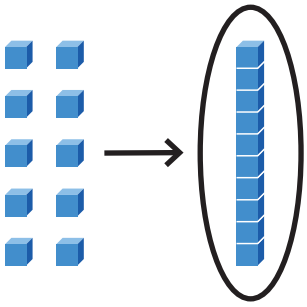
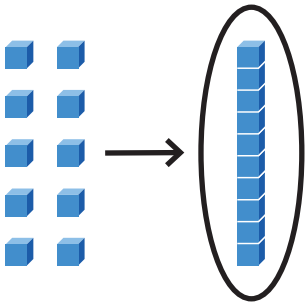
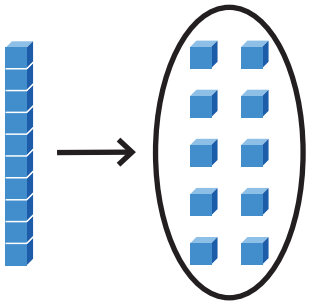
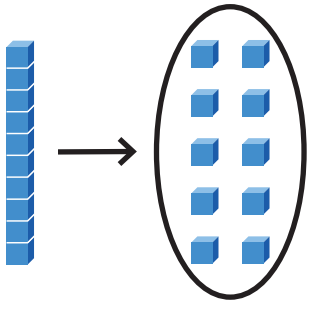


a one/ones An amount that has a value of one. The plural of one is ones.

una unidad/unidades Una cantidad que tiene un valor de 1. El plural de unidad es unidades.

a ten/tens A group of 10 ones. The plural of ten is tens.

una decena/decenas Un grupo de 10 unidades. El plural de decena es decenas.

English	Español
addend One of the numbers added together to find the sum.	**sumando** Uno de los números que se suman para hallar la suma.
$5 + \textcircled{6} = 11$	$5 + \textcircled{6} = 11$
C	
compose Put together.	**componer** Juntar.
	
D	
decompose Break apart.	**descomponer** Separar.
	
difference The amount you get when you subtract one number from another.	**diferencia** La cantidad que obtienes cuando restas un número a otro.
$10 - 6 = \textcircled{4}$	$10 - 6 = \textcircled{4}$

Grade 2 Unit 7 Glossary/2.º grado Unidad 7 Glosario

English	Español
digit The symbols used to write numbers – 0, 1, 2, 3, 4, 5, 6, 7, 8, 9.	**dígito** Los símbolos que se usan para escribir números: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9.
E	
equation A statement that includes an equal sign (=). It tells us that what is on one side of the sign is equal to what is on the other side. $6 = 4 + 2$	**ecuación** Enunciado que incluye un signo igual (=). Nos indica que lo que está a un lado del signo es igual a lo que está al otro lado. $6 = 4 + 2$
expression A statement with at least 2 numbers and at least 1 math operation (such as addition or subtraction). $6 + 4$ $3 - 3$	**expresión** Un enunciado con al menos 2 números y al menos 1 operación matemática (como suma o resta). $6 + 4$ $3 - 3$
S	
sum The total when 2 or more numbers are added. $8 + 6 = 14$	**suma** El total cuando se suman 2 o más números. $8 + 6 = 14$