LESSON MAKER PRO

Place Value Puzzles

Make numbers with hundreds, tens, and ones.

GRADE 2 · 2.NS.2.e

2.NS.2.e "Compose and decompose whole numbers up to 200 by making connections between a variety of models (e.g., base 10 blocks, place value cards, presented orally, in expanded or standard form) and counting strategies (e.g., 156 can be 1 hundred..."

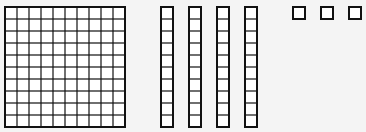
NAME _____ DATE _____

BUILD NUMBERS DIFFERENT WAYS

A whole number can be made with hundreds, tens, and ones. You can trade 1 hundred for 10 tens, or 1 ten for 10 ones, so the same number can have more than one breakdown.

WORKED EXAMPLE

A craft bin has 143 buttons. Break 143 into hundreds, tens, and ones.



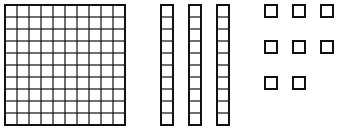
143

1. 143 = 100 + 40 + 3.
2. 100 is 1 hundred.
3. 40 is 4 tens, and 3 is 3 ones.
4. 143 is 1 hundred, 4 tens, and 3 ones.

Answer: 1 hundred, 4 tens, 3 ones

PRACTICE Continued practice

1 The model shows toys in a box. What number does it show?



ANSWER _____

2 A sticker book has 164 stickers. Write the number in expanded form.

ANSWER _____

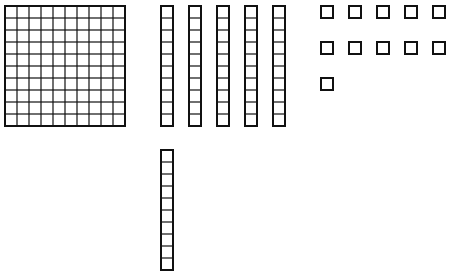
3 A crayon case has 126 crayons. Write 126 as hundreds, tens, and ones.

ANSWER _____

4 A robot kit has 152 bolts. Nia says 152 is 15 tens and 2 ones. Is Nia correct? Write yes or no.

ANSWER _____

5 The model shows tokens in a game chest. What number does it show? Explain a trade.



ANSWER _____

_____

APPLY IT Show your work

1 At the pet fair, Sam counts 184 toy balls. He puts them into 1 hundred, 7 tens, and 14 ones. Is Sam's breakdown correct? Write yes or no.

WORK SPACE

ANSWER

2 Leo gets these place value cards at a game club. What number do the cards make? Write the number and its expanded form.

LEO'S PLACE VALUE CARDS

Card	Value
Hundreds	100
Tens	70
Ones	9

ANSWER

CHALLENGE One step up

A prize box has 196 trading cards. Write two different ways to show 196 with hundreds, tens, and ones.

WORK SPACE AND ANSWER

ANSWER KEY

Place Value Puzzles

GRADE 2 · 2.NS.2.e

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	The model shows toys in a box. What number does it show?	**138**
2	A sticker book has 164 stickers. Write the number in expanded form.	**100 + 60 + 4**
3	A crayon case has 126 crayons. Write 126 as hundreds, tens, and ones.	**1 hundred, 2 tens, 6 ones**
4	A robot kit has 152 bolts. Nia says 152 is 15 tens and 2 ones. Is Nia correct? Write yes or no.	**Yes**
5	The model shows tokens in a game chest. What number does it show? Explain a trade.	**171. Regroup 1 hundred, 6 tens and 11 ones as 1 hundred, 7 tens and 1 one.**

PART 2 · APPLY IT

1. **Yes** 1 hundred is 100, 7 tens is 70, and 14 ones is 14. 100 + 70 + 14 = 184.
2. **179; 100 + 70 + 9** Add the card values: 100 + 70 + 9 = 179.

CHALLENGE

1 hundred, 9 tens, 6 ones; 1 hundred, 8 tens, 16 ones

Accept equivalent decompositions that total the stated number, including trades of one ten for 10 ones or one hundred for 10 tens. For the challenge, accept any two different correct hundreds, tens, and ones breakdowns.