LESSON MAKER PRO

Place Value Switches

Trade place-value units to show numbers in new ways.

GRADE 3 · 3.NS.1.c

3.NS.1.c "Compose, decompose, and represent numbers up to 9,999 in multiple ways, according to place value (e.g., 256 can be 1 hundred, 14 tens, 16 ones, but also 25 tens, 6 ones), with and without models."

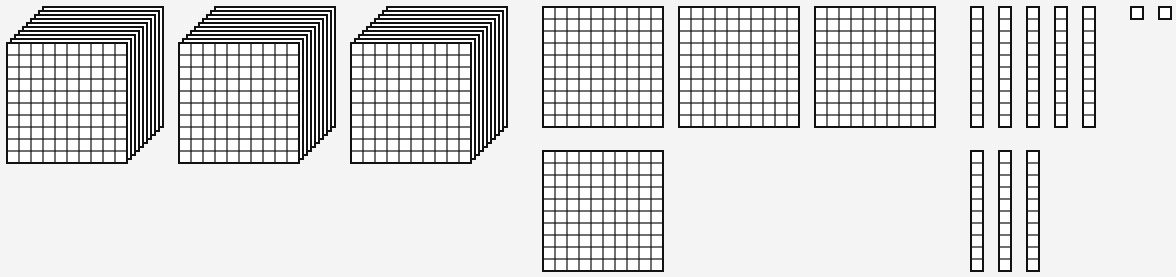
NAME _____ DATE _____

TRADE PLACE VALUES

You can trade 1 thousand for 10 hundreds, 1 hundred for 10 tens, or 1 ten for 10 ones. The number stays the same after a trade, but the way you name its parts changes.

WORKED EXAMPLE

Write 3,482 as thousands, hundreds, tens, and ones. Then trade 1 hundred for 10 tens.



3482

1. Start with 3 thousands, 4 hundreds, 8 tens, and 2 ones.
2. Trade 1 hundred for 10 tens.
3. Now there are 3 hundreds and 18 tens.
4. Keep the 3 thousands and 2 ones the same.

Answer: 3 thousands, 3 hundreds, 18 tens, 2 ones

PRACTICE 6 problems

1 Write 7,260 using hundreds, tens, and ones only. Do not use thousands.

ANSWER _____

2 What number is 45 hundreds, 3 tens, and 8 ones?

ANSWER _____

PRACTICE Continued practice

3 Complete the representation: 7 thousands, 19 hundreds, ___ tens, and ___ ones = 8,914.

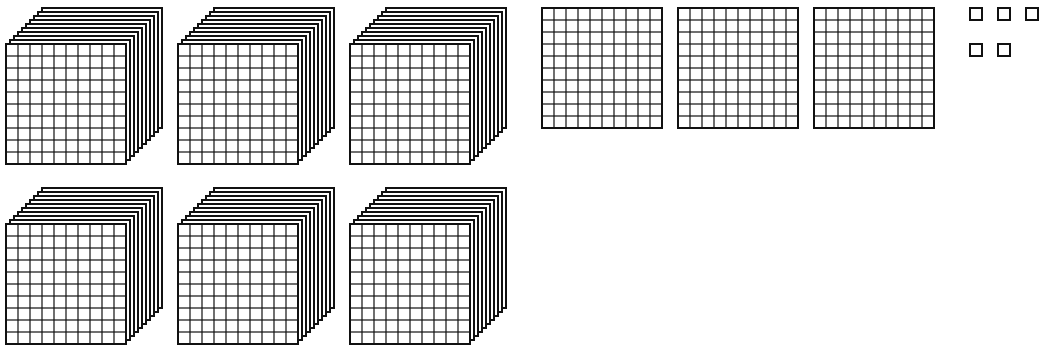
ANSWER _____

_____

4 Complete the representation: 5 thousands, ___ hundreds, 13 tens, and 2 ones = 6,432.

ANSWER _____

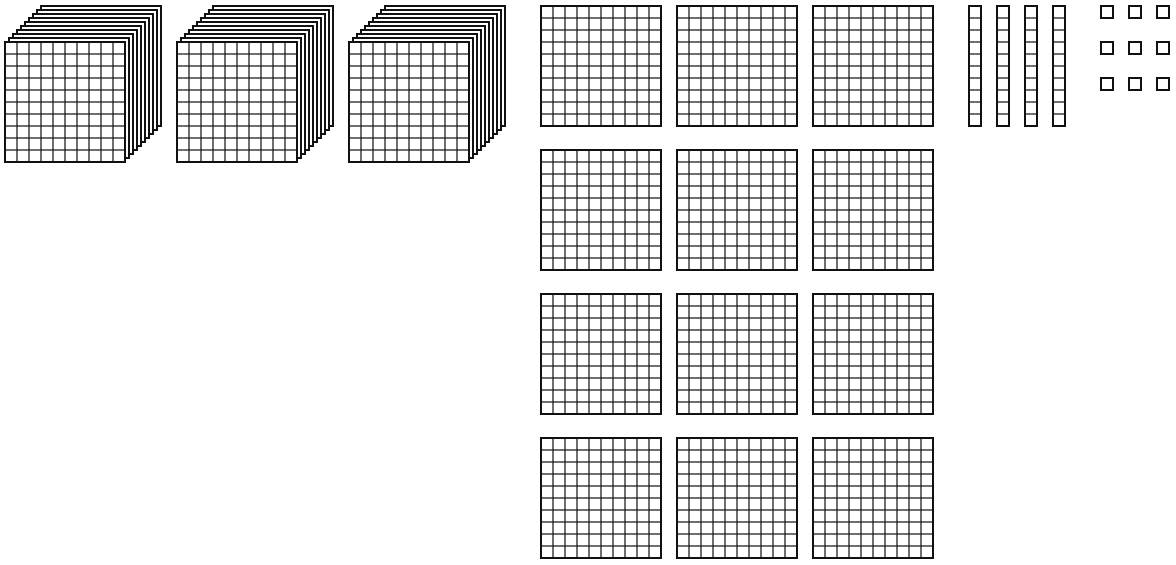
5 Read the model. Write the number in expanded form.



ANSWER _____

PRACTICE Continued practice

6 What number does this model show? Write an equation using the shown groups.



ANSWER _____

APPLY IT Show your work

1 The school book drive collected 3,684 books. Write the number in expanded form. Then write it using 36 hundreds, tens, and ones.

WORK SPACE

ANSWER

2 Maya has 8,250 points in a game. She trades 1 thousand for 10 hundreds. Then she trades 2 hundreds for 20 tens. Write her score using thousands, hundreds, tens, and ones after both trades.

WORK SPACE

ANSWER

CHALLENGE One step up

Use 8 thousands, more than 15 hundreds, and 9 ones to show 9,999. What is the greatest number of tens you can use? Write the full representation and explain how you know.

WORK SPACE AND ANSWER

ANSWER KEY

Place Value Switches

GRADE 3 · 3.NS.1.c

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Write 7,260 using hundreds, tens, and ones only. Do not use thousands.	**72 hundreds, 6 tens, 0 ones**
2	What number is 45 hundreds, 3 tens, and 8 ones?	**4,538**
3	Complete the representation: 7 thousands, 19 hundreds, ___ tens, and ___ ones = 8,914.	**1 ten, 4 ones**
4	Complete the representation: 5 thousands, ___ hundreds, 13 tens, and 2 ones = 6,432.	**13 hundreds**
5	Read the model. Write the number in expanded form.	**6,000 + 300 + 5**
6	What number does this model show? Write an equation using the shown groups.	**4,249; 3,000 + 1,200 + 40 + 9 = 4,249.**

PART 2 · APPLY IT

1. **3,000 + 600 + 80 + 4; 36 hundreds, 8 tens, 4 ones** Break 3,684 into 3 thousands, 6 hundreds, 8 tens, and 4 ones. Trade the 3 thousands and 6 hundreds for 36 hundreds.
2. **7 thousands, 10 hundreds, 25 tens, 0 ones** After the first trade, the score is 7 thousands, 12 hundreds, 5 tens, and 0 ones. Trading 2 hundreds for 20 tens leaves 10 hundreds and makes 25 tens.

CHALLENGE

8 thousands, 16 hundreds, 39 tens, 9 ones. More than 15 hundreds means at least 16 hundreds, so 16 hundreds leaves the most value for tens.

Accept equivalent place-value wording and correct comma use. For items with required units or trades, accept only decompositions that meet every stated condition.