LESSON MAKER PRO

# Place Value Power

*Add and subtract three-digit numbers.*

**GRADE 2 · 2.NBT.B.7**

**CCSS.Math.Content.2.NBT.B.7** "Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method..."

NAME _____ DATE _____

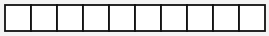
## TRADE BY PLACE

Line up hundreds, tens, and ones. When you add 10 or more in one place, trade for 1 in the next place. When you need more to subtract, break apart 1 ten or 1 hundred. For a drawing, use a large square labeled 100 for a hundred, a long stick labeled 10 for a ten, and a small square for one. Ten ones trade for one ten; ten tens trade for one hundred. Draw before and after each trade.

### WORKED EXAMPLE

A toy bin has 463 blocks. Add 159 more blocks. How many blocks are there? In the strip, each small square is one. These 10 ones trade for one ten.

**10 ones = 1 ten**



1. Add ones: 3 + 9 = 12. Write 2 ones and trade 10 ones for 1 ten.
2. Add tens: 6 + 5 + 1 = 12. Write 2 tens and trade 10 tens for 1 hundred.
3. Add hundreds: 4 + 1 + 1 = 6.
4. 463 + 159 = 622.

**Answer: 622 blocks**

## PRACTICE 5 problems

**1** Mia has 326 toy bricks. She gets 142 more toy bricks. How many toy bricks does Mia have now?

**ANSWER** _____

**2** A bead shop has 581 beads. It packs 230 beads into bags. How many beads are left?

**ANSWER** _____

**3** A pet store has 247 fish. It gets 185 more fish. How many fish does the store have now?

**ANSWER** _____

**4** A game starts with 700 coins. You spend 356 coins. How many coins are left?

**ANSWER** _____

**5** Noah has 469 stickers. His cousin gives him 128 more stickers. How many stickers does Noah have now?

**ANSWER** _____

## APPLY IT Show your work

**1** The school library has 638 animal books. Students borrow 254 of the books. How many animal books are still in the library? Draw a base-ten model of 638 in the work space. Show the trade needed to remove 254, cross out what is removed, and label what remains. Write the matching subtraction steps; explain how your drawn trade matches a written step.

WORK SPACE

**ANSWER** _____

**2** A park has 375 red flowers and 268 yellow flowers. How many flowers are there in all? Draw base-ten models for both numbers. Combine them and show each trade by crossing out a group and drawing its replacement. Label the final model and write addition steps that match your trades.

WORK SPACE

**ANSWER** _____

## CHALLENGE One step up

A robot has 802 energy points. It uses 467 energy points. How many energy points are left? Show your place-value steps.

WORK SPACE AND ANSWER

**ANSWER KEY** # Place Value Power

**GRADE 2 · 2.NBT.B.7**

## PART 1 · PRACTICE

| # | PROBLEM | ANSWER |
|---|---|---|
| 1 | Mia has 326 toy bricks. She gets 142 more toy bricks. How many toy bricks does Mia have now? | **468** |
| 2 | A bead shop has 581 beads. It packs 230 beads into bags. How many beads are left? | **351** |
| 3 | A pet store has 247 fish. It gets 185 more fish. How many fish does the store have now? | **432** |
| 4 | A game starts with 700 coins. You spend 356 coins. How many coins are left? | **344** |
| 5 | Noah has 469 stickers. His cousin gives him 128 more stickers. How many stickers does Noah have now? | **597** |

## PART 2 · APPLY IT

1. **384** Start with 6 hundreds, 3 tens, 8 ones. Draw trading 1 hundred for 10 tens: 5 hundreds, 13 tens, 8 ones. Remove 2 hundreds, 5 tens, 4 ones; 3 hundreds, 8 tens, 4 ones remain = 384. Link the drawn hundred-to-tens trade to 638 = 500 + 130 + 8 and 638 − 254 = 384.
2. **643** The drawings combine to 5 hundreds, 13 tens, 13 ones. Trade 10 ones for 1 ten, giving 5 hundreds, 14 tens, 3 ones. Trade 10 tens for 1 hundred, giving 6 hundreds, 4 tens, 3 ones = 643. Match the exchanges to 5 + 8 = 13 ones and 7 + 6 + 1 = 14 tens.

## CHALLENGE

**335**

Preserve correct answers for all practice and challenge methods. For Apply 1 and 2 require actual base-ten drawings, visible equivalent trades and a connection to written subtraction/addition; algorithm-only answers do not complete these two tasks. Accept a consistent drawing convention with values labeled and small sketch inaccuracies that preserve counts.