

## Assessment : End-of-Unit Assessment

### Problem 1

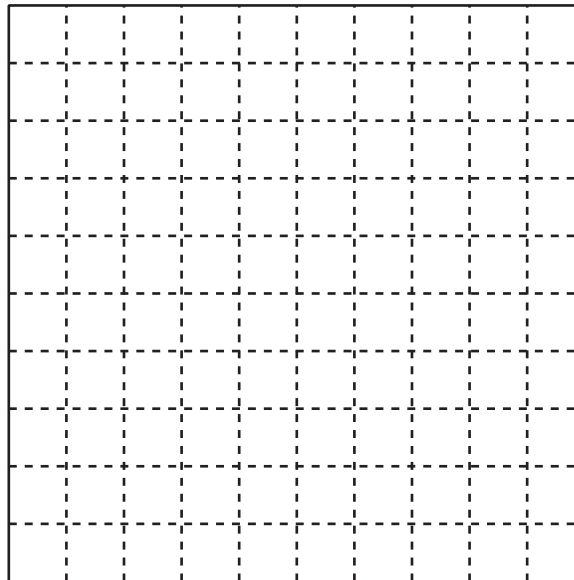
#### Standards Alignments

Addressing 2.NBT.A.1.a

#### Narrative

Students explain that a hundred is a bundle of 10 tens using a hundred block. Students may identify the groups of ten in the hundred block as the columns or the rows.

Use the diagram to explain how many tens are in one hundred.



### Solution

There are ten columns of 10 small squares in the large square and that makes 100 small squares total.

## Problem 2

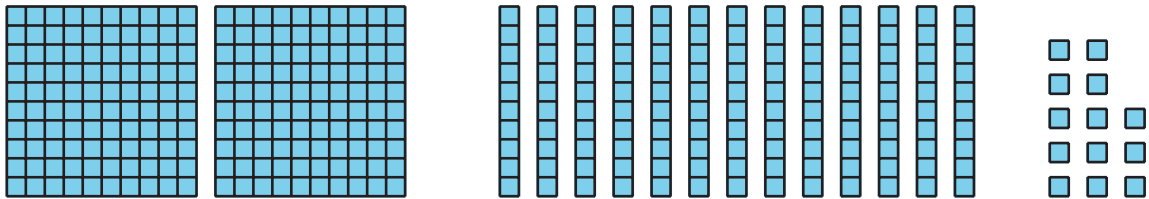
### Standards Alignments

Addressing 2.NBT.A.1, 2.NBT.A.3

### Narrative

Students write a number represented by a base-ten block diagram. Students need to group 10 tens into 1 hundred and 10 ones into 1 ten in order to write the number in standard form.

What is the value of this base-ten diagram?



## Solution

343

## Problem 3

### Standards Alignments

Addressing 2.NBT.A.3

### Narrative

Students examine different ways to express a number. They may select B if they do not understand the place value meaning of the digits in a 3-digit number. They may select C if they confuse tens and ones. They may select E if they focus on the 5 and 1 in 518 and forget about the 8 ones.

Select **2** ways to represent the number 518.

- A.  $500 + 10 + 8$
- B.  $5 + 1 + 8$
- C. 5 hundreds and 18 tens

- D. 51 tens and 8 ones
- E. 4 hundreds and 11 tens

Solution

["A", "D"]

Problem 4

### Standards Alignments

Addressing 2.NBT.A.1, 2.NBT.A.4

### Narrative

Students compare 3-digit numbers some of which are given in expanded form. Students who select A or E need more practice with the meaning of place value. Students who do not select B need more work with expanded form and students who do not select C or D need more work understanding the meaning of the three digits in a 3-digit number or with the  $<$  and  $>$  symbols.

Select **3** true statements.

- A.  $512 = 152$
- B.  $375 = 300 + 70 + 5$
- C.  $613 > 609$
- D.  $781 < 871$
- E.  $200 + 80 + 4 = 482$

Solution

["B", "C", "D"]

## Problem 5

### Standards Alignments

Addressing 2.NBT.A.4

### Narrative

Students compare the value of expressions. The expressions involve adding tens or hundreds with no composition of hundreds needed so the focus is on understanding place value. Students who do not perform well on this item may not be comfortable using the symbols  $<$  and  $>$  or they may be struggling to understand place value and addition. Consider asking them to write the two expressions in the problem as numbers as an intermediate step in order to diagnose where they are struggling.

Fill in each blank with  $<$ ,  $=$ , or  $>$  to make a true statement.

- $511$  \_\_\_\_  $151$
- $497 + 100 + 100$  \_\_\_\_  $703$
- $138$  \_\_\_\_  $118 + 10 + 10$

## Solution

- $511 > 151$
- $497 + 100 + 100 < 703$
- $138 = 118 + 10 + 10$

## Problem 6

### Standards Alignments

Addressing 2.NBT.A.1, 2.NBT.A.3

### Narrative

Students reason about place value and numbers with numbers written as words. They need to identify and write a number given in word form and then reason about a false statement about the number based on a misconception about place value. The number is 386 so the 8 represents 8 tens or 80 (but not 80 tens).

- Write three hundred eighty-six as a number.
- Han says that there are eighty tens in three hundred eighty-six. Do you agree with Han?

Explain your reasoning.

### Solution

- a. 386
- b. I don't agree with Han. The 8 in 386 means 80 but that's 80 ones rather than 80 tens. Eighty tens is 800 which is larger than 386.