

Grade 1: Place Value Tens

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1.NBT.C. Use place value understandings and properties of operations to add and subtract.

Fill in the missing number:

$$50 = 2 \text{ tens} + \underline{\quad} \text{ tens}$$

Solution

Correct if student writes the number 3.

50 is 5 tens, and 5 tens can be broken down into parts as 2 tens plus 3 tens. So the missing number is 3.

Extension

To extend the problem, you could ask students additional questions about the place value system, such as: What number goes in the blank to make a true equation?

$$4 \text{ ones} + 3 \text{ tens} = \underline{\quad}$$

(Answer: 34)

Elaboration on Alignment

Understanding the place value units helps students learn how to “borrow” and “carry” in the standard algorithms for adding and subtracting multi-digit numbers. It also prepares students to learn about decimal fractions in later grades. Using tens as a unit can also help with mental math (for example, in problems like $60 + 20 = 80$).

In positional notation, 50 is a kind of code for “5 tens and 0 ones,” or simply “5 tens.” We can decompose 5 tens in various ways, such as 2 tens + 3 tens. This is the same kind of thinking as when we decompose 5 of anything: 5 eggs = 2 eggs + 3 eggs.

The concept of a ten as a unit is a grade 1 expectation. It is meant to be hard to do this problem without thinking of tens as units, like eggs or buckets.

Putting the 50 on the left-hand side of the equals sign and the sum on the right privileges decomposition thinking over “result” thinking. It isn’t so much that we are *finding* the sum of 2 tens and 3 tens as that we are *making* a sum of 2 tens and 3 tens. This adds a dimension of algebraic thinking to the problem.

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Name: _____

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