

Homework Help for Math Out of the Box

Developing Number Concepts: Stories and Statements, Module A

Information about homework assignments is provided to help parents and other homework helpers with the mathematics ideas that are being developed. The homework help includes definitions of key vocabulary, questions to ask that will help students connect to the classroom investigations, problem solving examples, and other helpful explanations.

Homework 4A1 and 4A2

In Lessons 1–8, students examine properties of numbers and other numerical relationships.

Associative property: A property that states that the way three or more addends or factors are grouped before adding or multiplying does not affect the sum or the product.

Commutative property: A property that states that changing the order of the numbers being added or multiplied does not change the sum or the product.

$$3 + 8 + 7 = n$$

The communicative property can be used to change the order of the numbers, and then $3 + 7$ can be grouped, using the associative property, to make 10. $(3 + 7) + 8 = 18$

Solving for Missing Numbers

There are many strategies for determining missing numbers. Counting, testing numbers, or using knowledge of fact family relationships are all possible strategies.

Homework 4B1 and 4B2

In Lessons 8–12 students examine base-10 representations of whole numbers and compare and order numbers.

Expanded form: A representation of a number in which the value of the digits are expanded into an addition statement. $(243 = 200 + 40 + 3)$

Standard form: A representation of a number using the digits 0–9, with each digit having a place value. (243)

Word form: A representation of a number in words. $(\text{two hundred forty-three})$

When comparing numbers the following symbols and words can be used.

$<$ is less than $>$ is greater than $=$ is equal to



Homework 4C1 and 4C2

In Lessons 13–18, addition and subtraction concepts are investigated. These lessons focus on using rounding as an estimation strategy to judge the reasonableness of answers.

With the problem $1,281 + 2,364$, estimates can be made to the nearest thousands, hundreds, or tens. Each student should decide his or her own estimating strategy and use estimates to check the reasonableness of an answer.

$$\begin{array}{r} 1,281 \\ + 2,364 \\ \hline 3,645 \end{array} \quad \begin{array}{r} 1,000 \\ + 2,000 \\ \hline 3,000 \end{array} \quad \begin{array}{r} 1,300 \\ + 2,300 \\ \hline 3,600 \end{array} \quad \begin{array}{r} 1,280 \\ + 2,360 \\ \hline 3,640 \end{array}$$

Homework 3D1, 3D2, 3D3, and 3D4

In Lessons 19–30, multiplication and division facts are investigated. Multiplication problems in which one factor is a two-digit number may be new to fourth graders.

Two common strategies for two-digit multiplication are shown below.

Multiply each place in the top number by ones, then tens. Carry any trades to the next place-value column. Show the products in an addition problem.

$$\begin{array}{r} 42 \\ 695 \\ \times 15 \\ \hline 3475 \\ + 6950 \\ \hline 10,420 \end{array}$$

Multiply each place in the top number by ones, then tens. Show the products in an addition problem.

$$\begin{array}{r} 695 \\ \times 15 \\ \hline 450 \\ 3000 \\ 50 \\ 900 \\ + 6000 \\ \hline 10,420 \end{array}$$