

Section Overview



Writing Numbers in Scientific Notation

Lesson 3-4

Why? Scientific notation is used to express very large or very small numbers.

A number written in scientific notation has two parts that are multiplied.



Multiplying and Dividing with Decimals

Lessons 3-5, 3-6, and 3-7

Why? Multiplying and dividing decimals is used to convert currency.

Multiply the digits. Then place the decimal point by adding the number of decimal places in the factors.

7.13 2 decimal places
 × 0.2 +1 decimal place

 1.426 3 decimal places

$$0.36 \overline{)11.2}$$

Make the divisor a whole number by multiplying the divisor and dividend by the same power of ten.
 $0.36 \times 10^2 = 36$
 $11.2 \times 10^2 = 1120.00$

$$\begin{array}{r} 31.11 \\ 36 \overline{)1120.00} \\ \underline{-108} \\ 40 \\ \underline{-36} \\ 40 \\ \underline{-36} \\ 40 \\ \underline{-36} \\ 4 \end{array}$$

Align the decimal point in the quotient.

Interpreting the Quotient

Lesson 3-8

Why? When you solve a division problem that has a remainder, you need to decide what the remainder represents.

When the question asks	→	You should
How many whole groups can be made when you divide?	→	Drop the decimal part of the quotient.
How many whole groups are needed to put all items from the dividend into a group?	→	Round the quotient up to the next highest whole number.
What is the exact number when you divide?	→	Use the entire quotient as the answer.

Solving Equations Containing Decimals

Lesson 3-9

Why? To solve one-step equations with decimals, apply the rules for computing with decimals when you are isolating the variable.

Equation	Operation	Inverse Operation	Isolate the Variable
$x + 9.7 = 15$	Addition	Subtraction	$x = 5.3$
$y - 0.5 = -3.9$	Subtraction	Addition	$y = -3.4$
$-6 \cdot n = 2.4$	Multiplication	Division	$n = -0.4$
$\frac{a}{1.7} = 3$	Division	Multiplication	$a = 5.1$