

Section Overview

Operations with Decimals

Lessons 4-7, 4-8

Why? The most common application of decimal operations is using money.

Add $5.63 + 11.8$.

$$\begin{array}{r} 11.80 \\ + 5.63 \\ \hline 17.43 \end{array}$$

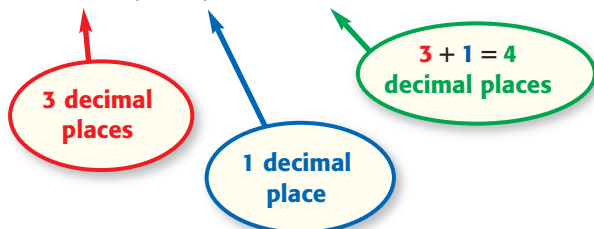
Use zeros at the end when necessary to write an **equivalent decimal** so that all addends have the same number of digits to the right of the decimal point.

Subtract $12 - 4.31$.

$$\begin{array}{r} 12.00 \\ - 4.31 \\ \hline 7.69 \end{array}$$

Multiply $0.004 \cdot (-2.6)$.

$$0.004 \cdot (-2.6) = -0.0104$$



Divide $9.06 \div 0.3$.

$$\begin{aligned} 9.06 \div 0.3 \\ &= (10 \cdot 9.06) \div (10 \cdot 0.3) \\ &= 90.6 \div 3 \\ &= 30.2 \end{aligned}$$

Make the **divisor** a whole number by multiplying the dividend and the divisor by the same **power of ten**.

Metric Measurements

Lesson 4-9

Why? Metric units of measure are commonly used in science

Length	Mass	Capacity
1 kilometer = 1,000 meters	1 kilogram = 1,000 grams	1 liter = 1,000 milliliters
1 meter = 100 centimeters	1 gram = 1,000 milligrams	
1 meter = 1,000 millimeters		

To convert to a **smaller** unit, **multiply** by a power of 10.

To convert to a **larger** unit, **divide** by a power of 10.

Solving Equations Containing Decimals

Lesson 4-10

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	$y = 4.4$
$-6 \cdot n = 2.4$	Multiplication	Division	$n = -0.4$
$\frac{a}{1.7} = 3$	Division	Multiplication	$a = 5.1$