

KEY CONCEPT OVERVIEW

Lessons 1 through 4 focus on understanding **place value** and representing numbers from millions to thousandths on a **place value chart**.

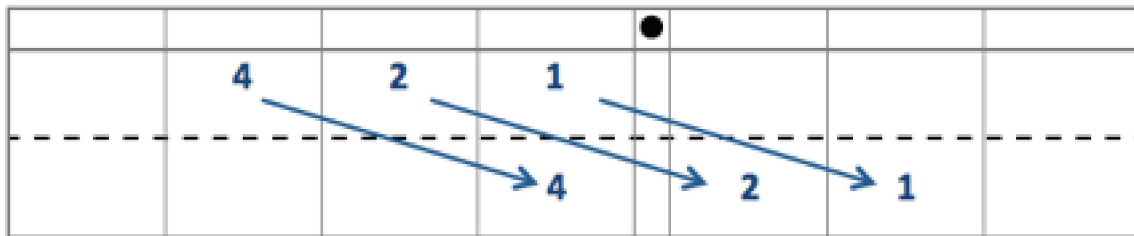
You can expect to see homework that asks your child to do the following:

- Multiply and divide by 10, 100, and 1,000 using the place value chart (as shown in the sample problem below).
- Write numbers in **exponential form** (e.g., $10,000 = 10^4$), and write exponential numbers in **standard form** (e.g., $9 \times 10^3 = 9,000$).
- Use knowledge of measurements (e.g., $3 \text{ m} = 300 \text{ cm}$) and exponential form (e.g., $3 \times 10^2 = 300$) to solve problems.

SAMPLE PROBLEM (From Lessons 1–4)

Use the place value chart and arrows to show how the value of each digit in the number 421 changes when it is divided by 100.

a. $421 \div 100 = 4.21$



b. Write 100 in exponential form.

$$100 = 10^2$$

c. Convert 421 millimeters to meters, and write an equation with an exponent.

$$421 \text{ mm} = 0.421 \text{ m}$$

$$421 \div 10^3 = 0.421$$

LEARN MORE by viewing a video about using place value disks to solve multiplication problems. Visit eurmath.link/multiplication-pvdisks.

Additional sample problems with detailed answer steps are found in the *Eureka Math Homework Helpers* books. Learn more at GreatMinds.org.

HOW YOU CAN HELP AT HOME

- Practice drawing and labeling a place value chart (to the thousandths). Take turns drawing disks on the chart. Challenge each other to say the name of the number that was drawn.
- Practice metric conversions with your child in the kitchen. For example, measure water, juice, or milk in milliliters and liters (1 L = 1,000 mL). Measure rice, beans, oatmeal, or sugar in grams and kilograms (1 kg = 1,000 g). Measure the kitchen counter, refrigerator, or walls in millimeters, centimeters, and meters (1 m = 100 cm and 1 m = 1,000 mm).
- Play the “Exponent” dice game with your child.
 1. Your child rolls a die to represent an exponent. The base number is 10.
 2. You ask your child to say the number in standard form.

For example, your child rolls a 4. You ask, “Say 10^4 in standard form.” He says, “10,000.”

TERMS

Exponential form: A numeric form involving exponents (e.g., the exponential form of 1,000 is 10^3).

Place value: The value of a given digit based on its position in a number (e.g., the place value of the digit 2 in 235 is 200 (2 hundreds)).

Standard form: A way to write numbers using the digits 0–9 (e.g., the standard form of seventy-two and forty-eight thousandths is 72.048).

MODELS

Place Value Chart

1,000,000	100,000	10,000	1,000	100	10	1	.	$\frac{1}{10}$	$\frac{1}{100}$	$\frac{1}{1000}$
Millions	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones	.	Tenths	Hundredths	Thousandths
							.			