NAME

Module 11 Simplifying Algebraic Expressions with Polynomials
Lesson 2 Using Scientific Notation

guided notes

Lesson Objectives

- Convert numbers between scientific notation and standard form.
- Multiply and divide numbers written in scientific notation.

Scientific notation is used for keeping track of place value in very large or very small numbers.

A number is in scientific notation if it is written in the form $1 \leq a < 10$ and n is an integer.

In scientific notation, small numbers are written with negative exponents, and larger numbers are written with positive exponents.

1. The number of meters in one micron is 1×10^{-6}. Write this number in standard form. 0.000001 meters

2. There are 110,000 hairs on an average human head. Write this number in scientific notation. 1.1×10^5 hairs

3. Each side of a square microchip is 9×10^{-3} m long. Find the area of the microchip. The area of the microchip is 8.1×10^{-5} or 0.000081 square meters.

4. The mass of Earth is 6×10^{27} g. The mass of the planet Pluto is 1.3×10^{25} g. How many times greater is Earth's mass than Pluto's mass?
Earth's mass is 4.6×10^2 or 460 times greater than Pluto's.