

Scientific Notation

Solve the problems.

- 1 Which of the following expressions is equivalent to 4,325,000,000?

A 4.325×10^{-9} C 4.325×10^6
 B 4.325×10^{-6} D 4.325×10^9

Carson chose **A** as the correct answer. How did he get that answer?

Will the exponent be positive or negative?



- 2 The mass of Earth's moon is about 7×10^{22} kilograms. The mass of Jupiter is about 1.89×10^{27} kilograms. The mass of Jupiter is about how many times the mass of Earth's moon?

Show your work.

Solution: _____

How can the parts of each number help you to compare?



- 3 Last year a restaurant chain spent 3.3×10^6 dollars opening new restaurants. This year the restaurant will spend 9.9×10^5 dollars. Which statement is true?

A The restaurant spent \$330,000 dollars last year.
 B This year the restaurant will spend \$9,900,000.
 C The restaurant spent 6.6×10^6 dollars more this year than last year.
 D This year the restaurant will spend about 0.3 times the amount it did last year.

How can you write numbers in standard form?



Solve.

4 Which of the following numbers is NOT in scientific notation?

- A** 4.5×10^{-12}
- B** 3.025×10^{-9}
- C** 0.21×10^7
- D** 1.1×10^{10}

What does it mean for a number to be in scientific notation?



5 Write 0.0000003105 in scientific notation. Explain how you found your answer.

Show your work.

Is the number between 0 and 1 or is it greater than 1? What does that tell you about the number in scientific notation?



Solution: _____

6 The area of the Pacific Ocean is about 1.56×10^8 square kilometers. The area of the East China Sea is about 1.2×10^6 square kilometers. Tell whether each statement is *True* or *False*.

- a.** The area of the Pacific Ocean is about 15,600,000 square kilometers. True False
- b.** The area of the Pacific Ocean is about 130 times the area of the East China Sea. True False
- c.** The area of the East China Sea is about 130 times the area of the Pacific Ocean. True False
- d.** The area of the East China Sea is about 1,200,000 square kilometers. True False

How do you compare numbers in scientific notation?

