

**Tell whether each number is written correctly in scientific notation.  
If incorrectly written, state the reason.**

$71 \cdot 10^{22}$

$10.2 \cdot 10^3$

$9.9 \cdot 10^{-4}$

$0.75 \cdot 10^5$

**Write each number in scientific notation.**

$40,102$

$0.06$

$0.0057$

**Solve. Show your work. Round the coefficient to the nearest tenth.**

$7.2 \cdot 10^3 - 8.2 \cdot 10^2$

$4.3 \cdot 10^5 - 4.2 \cdot 10^4$

$2.44 \cdot 10^3 + 1.9 \cdot 10^5$

$1.42 \cdot 10^{-5} + 2.5 \cdot 10^{-4}$

**Solve. Show your work. Round the coefficient to the nearest tenth.**

$$5.7 \cdot 10^4 \cdot 2 \cdot 10^3$$

$$2.4 \cdot 10^{-2} \cdot 5 \cdot 10^{-1}$$

$$5.75 \cdot 10^{-5} \div (7.15 \cdot 10^7)$$

$$8.45 \cdot 10^{11} \div (1.69 \cdot 10^{-8})$$

**Write each number in standard form.**

$$8.12 \cdot 10^{-3}$$

$$2.5 \cdot 10^{-2}$$

$$7.1 \cdot 10^3$$

$$3.46 \cdot 10^2$$

A geologist measured the thickness of two layers of minerals in a rock formation to be  $9.7 \times 10^{-5}$  meters and  $3.8 \times 10^{-6}$  meters.

What is the total thickness of the two layers of minerals?

Extra Credit

In 2011, the approximate population of California was 37,691,900 while that of Michigan was about 9,876,200.

- a)** Write the populations of the two states in scientific notation. Round the coefficients to the nearest hundredth.