

Write the number of problems you completed (out of 18) on the top of pg 307 and start correcting.

16–21. Write the estimated weight of each dinosaur in scientific notation. **pg.307**

Estimated Weight of Dinosaurs	
Name	Pounds
<i>Argentinosaurus</i>	220,000
<i>Brachiosaurus</i>	100,000
<i>Apatosaurus</i>	66,000
<i>Diplodocus</i>	50,000
<i>Camarasaurus</i>	40,000
<i>Cetiosauriscus</i>	19,850

- 16. *Apatosaurus* 6.6×10^4 lb
- 17. *Argentinosaurus* 2.2×10^5 lb
- 18. *Brachiosaurus* 1×10^5 lb
- 19. *Camarasaurus* 4×10^4 lb
- 20. *Cetiosauriscus* 1.985×10^4 lb
- 21. *Diplodocus* 5×10^4 lb

26. **Classifying Numbers** Which of the following numbers are written in scientific notation?

- 0.641×10^3 9.999×10^4
- 2×10^1 4.38×5^{10}

9.999×10^4 and 2×10^1

Use the table for problems 16–21. Write the diameter of the fibers in scientific notation.

Average Diameter of Natural Fibers	
Animal	Fiber Diameter (cm)
Vicuña	0.0008
Angora rabbit	0.0013
Alpaca	0.00277
Angora goat	0.0045
Llama	0.0035
Orb web spider	0.015

- pgs 313-314**
- 16. Alpaca 2.77×10^{-3} cm
 - 17. Angora rabbit 1.3×10^{-3} cm
 - 18. Llama 3.5×10^{-3} cm
 - 19. Angora goat 4.5×10^{-3} cm
 - 20. Orb web spider 1.5×10^{-2} cm
 - 21. Vicuña 8×10^{-4} cm

Physical Science The table shows the length of the radii of several very small or very large items. Complete the table.

Item	Radius in Meters (Standard Notation)	Radius in Meters (Scientific Notation)
28. The Moon	1,740,000	1.74×10^6
29. Atom of silver	0.000000000125	1.25×10^{-10}
30. Atlantic wolfish egg	0.0028	2.8×10^{-3}
31. Jupiter	71,490,000	7.149×10^7
32. Atom of aluminum	0.000000000182	1.82×10^{-10}
33. Mars	3,397,000	3.397×10^6

Oct 9-4:09 PM

LESSON 10.4 Operations with Scientific Notation



Perform operations in scientific notation

Oct 9-4:15 PM

Adding and Subtracting with Scientific Notation

pg. 315

Numbers in scientific notation can be added and subtracted, either directly or by rewriting them in standard form.

The table below shows the population of the three largest countries in North America in 2011. Find the total population of these countries.

Country	United States	Canada	Mexico
Population	3.1×10^8	3.38×10^7	1.1×10^8

$$10^7 \times 10^1 = 10^8$$

+

Method 1:

STEP 1 First, write each population with the same power of 10.

United States: 3.1×10^8
 Canada: 0.338×10^8
 Mexico: 1.1×10^8

STEP 2 Add the multipliers for each population.

$$3.1 + 0.338 + 1.1 = 4.538$$

STEP 3 Write the final answer in scientific notation: 4.538×10^8 .

338000000

Method 2:

STEP 1 First, write each number in standard notation.

United States: 310,000,000
 Canada: 33,800,000
 Mexico: 110,000,000

STEP 2 Find the sum of the numbers in standard notation.

$$310,000,000 + 33,800,000 + 110,000,000 = 453,800,000$$

STEP 3 Write the answer in scientific notation: 4.538×10^8 .

Oct 9-4:33 PM

Method 1:

STEP 1 First, write each population with the same power of 10.

$$4.2 \times 10^6 + 2.25 \times 10^5 + 2.8 \times 10^6$$

225000

$$0.225 \times 10^6$$

$$\begin{array}{r} 4.2 \\ 2.8 \\ 0.225 \\ \hline 7.225 \end{array} \times 10^6$$

Method 2:

STEP 1 First, write each number in standard notation.

$$4.2 \times 10^6 + 2.25 \times 10^5 + 2.8 \times 10^6$$

4200000
 225000
 2800000

$$\begin{array}{r} 4200000 \\ + 225000 \\ + 2800000 \\ \hline 7225000 \\ \uparrow \\ 7.225 \times 10^6 \end{array}$$

Oct 9-4:35 PM

Method 1:

STEP 1 First, write each population with the same power of 10.

$$8.5 \times 10^3 - 5.3 \times 10^3 - 1.0 \times 10^2$$

$$\frac{1.0 \times 10^2}{100}$$

$$0.1 \times 10^3$$

$$\begin{array}{r} 8.5 \\ - 5.3 \\ \hline 3.2 \end{array}$$

$$3.2$$

$$- 0.1$$

$$\boxed{3.1 \times 10^3}$$

Method 2:

STEP 1 First, write each number in standard notation.

$$8.5 \times 10^3 - 5.3 \times 10^3 - 1.0 \times 10^2$$

$$8,500 - 5,300 - 100$$

$$3,100$$

$$3.1 \times 10^3$$

Oct 9-4:35 PM

Homework
Worksheet

Oct 9-4:38 PM