The population of the US is about 316,130,000.

The average american produces about 1600 pounds of trash per year.

How many total pounds of trash do all americans produce each year?

5.05808E11

5.05808×10^{11}

According to the Environmental Protection Agency, the average American produces about 4.4 pounds (2 kg) of garbage a day, or a total of 29 pounds (13 kg) per week and 1,600 pounds (726 kg) a year. This only takes into consideration the average household member and does not count industrial waste or commercial trash. If this sounds like a staggering number, you would be surprised to know that Americans are not the number one producers of garbage in the world. In Mexico, the average household produces 30 percent more garbage than in America.

While the numbers may be difficult to grasp, consider this: with the garbage produced in America alone, you could form a line of filled-up garbage trucks and reach the moon. Or cover the state of Texas two and a half times. Or bury more than 990,000 football fields under six-foot high (1.8 meter high) piles of waste. According to WM Recycle America, LLC, Americans alone throw away enough aluminum to duplicate the full commercial air fleet of the US.

Scientific Notation:

A number between 1 and 10 times a power of 10.

It's a compact way to write really large or really small numbers.

Is each number written in Scientific Notation?

1. 15.03×10^6 NO
2. 0.98×10^{-2} NO
3. 8.33×10^{-4} Yes
4. $10^7 \rightarrow 1 \times 10^7$ Yes

Does each scientific notation number represent a "big" number or a "small" number?

1. 7.908×10^{-5} Small
2. 3.74×10^2 BIG
3. 2.0027×10^8 BIG
4. 9.998×10^{-3} Small

Take a small white board

Write each number in standard notation (decimal notation) (without exponents)

1. 10^5

$1. \times 10^5$

100000

2. 10^{-4}

$.0001 \times 10^{-4}$

3. 10^{-2}

$.01 \times 10^{-2}$

4. $10^6 = 1,000,000$

Write each number in Standard Notation (decimal notation)

1. $1,004 \times 10^{-6}$

.000001004

2. 8.3×10^{3}

8300.

3. 6.23×10^{-4}

.00623

4. 5.003×10^5

500300

Write each number in scientific notation

1. 158,000.

1.58×10^5

2. 0.01003

1.003×10^{-2}

3. 4,791.2

4.7912×10^3

4. 0.00000509

5.09×10^{-6}

$(5) \bullet (6) = 30$

$(5) \bullet (6) = 30$

x2 ÷2

$(10) \bullet (3) = 30$

247.5×10^5

Why isn't this number in scientific notation?

247.5 is too big

24750000

Write this number in scientific notation

2.475×10^7