

Define scientific notation and express a very large or small number in scientific notation mathematically. Build appreciation of math through representations of smallest and biggest numbers. CCSS.MATH.CONTENT.8.EE.A.3 | US_EN_08_MAT_C10_WS_m1

The bio bottles launched by X-Labs are ready for distribution. Let's take a look at how everything is being organized.

1

You need to pack the bio-bottles in a big cardboard box. Each cardboard box should contain 10,000 bottles. Check the box which represents the correct number of bottles in the exponential form.

10^3

10^5

10^{-4}

10^4

2

Total number of bottles to be packed is 5,234,000,000. Write the missing numbers in the boxes given below and write the total number of bottles in scientific notation.

Scientific notation for a number: $m \times 10^n$
where, $1 \leq m < 10$ and n is an integer

$$5,234,000,000 = \boxed{} \cdot \boxed{} \boxed{} \boxed{} \times 1,000,000,000$$

$$= \boxed{} \cdot \boxed{} \boxed{} \boxed{} \times 10^9$$



3

About 1,700,000,000 bottles will be transported by trucks. Circle the given number in scientific notation from the given options.

1.7×10^9

1.7×10^{10}

17×10^9

17×10^{10}



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4 0.00025 % of the total bottles will be distributed by bicycle. Check the box which represents the value (in percent) in scientific notation.



2.5×10^{-5}

2.5×10^{-4}

2.5×10^{-2}

2.5×10^{-3}

5 The farthest distribution center of bio-bottles is 630,000 ft away from you. Write the missing numbers in the boxes provided and find the distance in scientific notation. Circle the correct answer from the options below.

Scientific notation can be written as: $m \times 10^n$: $1 \leq m < 10$ and n is an integer

$$630,000 = \boxed{} \cdot \boxed{} \times \boxed{} \boxed{} \boxed{} \boxed{} \boxed{} \boxed{}$$

6.3×10^4

6.3×10^5

6.3×10^6

6 The shortest distance by which the bio-bottles have to be transported is 0.25×10^2 mi. Convert mi into ft and write your answers in the boxes given below.

Hint: 1 mi = 5280 ft



$$0.25 \times 10^2 \text{ mi} = 0.25 \times 10^2 \boxed{} \text{ 5280 ft}$$

$$0.25 \times 10^2 \text{ mi} = \boxed{} \cdot \boxed{} \boxed{} \times 10 \boxed{} \text{ ft}$$



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$$630,000 = \boxed{6} \boxed{3} \times \boxed{1} \boxed{0} \boxed{0} \boxed{0} \boxed{0} \boxed{0}$$

6.3×10^4

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$0.25 \times 10^2 \text{ mi} = 0.25 \times 10^2 \times \boxed{} \times 5280 \text{ ft}$



$0.25 \times 10^2 \text{ mi} = \boxed{1} \boxed{3} \boxed{2} \times 10^{\boxed{5}} \text{ ft}$