

KEY

JAN 22, 2016

1. (5 pt) Rewrite each of the following into decimal notation or scientific notation, whichever is called for.

0.00309 expressed in scientific notation is 3.09×10^{-3}

3009.1 expressed in scientific notation is 3.0091×10^3

1268×10^4 expressed in correct scientific notation is 1.268×10^7

3.01×10^{-3} expressed in correct decimal notation is 0.00301

9.91×10^5 expressed in correct decimal notation is 991,000

2. (1 pt) Which of the following numbers is (are) equivalent?

2) 1.47×10^3

3) 147000×10^{-3}

1) 1,470

a) 1 and 2 of them

b) 2 and 3

c) 1 and 3

d) none of them e) all

3. (1 pt) How many significant digits are indicated in 2300 kg?

4

d) 5

a) 2 b) 3 c)

4. (2 pt) Perform the following mathematical operations. Express your answers to the correct number of significant figures.

$(2.1 \times 10^6) \times (8.49 \times 10^{-11}) =$

$1.78 \times 10^{-4} \rightarrow 1.8 \times 10^{-4}$

$\frac{(6.983 \times 10^3)}{(4 \times 10^{14})} =$

$1.746 \times 10^{-11} \rightarrow 2 \times 10^{-11}$

5. (1 pt) Which of the following performs the indicated mathematical operations and expresses the answer using the proper number of significant digits? $8.97 + 6.3214 + .9001 =$

a) 16.19 b) 16.2 c) 16.192 d) 16.1915

6. (4 pt) Classify each of the following as an exact (E) or inexact number (I) number.

A) 7 railroad cars

B) 12 dozen apples

C) 14 gallons of gasoline

D) The temperature is 93°F

E

E

I

I

7. (1 pt) Which one of the following numbers contains 4 significant figures?

A) 0.0257

B) 3090

C) 39.40

D) 92018

E) 6.43

15
15