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1.1-110

10^{-3} is the same as

(a) 1/1000 only
(b) 1000 only
(c) 0.001 only
(d) 1/1000 and 0.001

1.1-120

5.3×10^{-2} is the same as

(a) 530
(b) 1 / 530
(c) 5.3 / 100
(d) 100 / 5.3

1.1-125

Which of the following is different?

(a) 1/500

(b) 0.02

(c) 2×10^{-3}

(d) 500^{-1}

1.1-130

A Nerf ball has a mass of 50.0 grams and a volume of 549 cm^3. Its density is

(a) (5.49/5.00) x 10^{-1} gm/cm^3
(b) (5.49/5.00) x 10 cm^3/gm
(c) (5.00/5.49) x 10^{-1} gm/cm^3
(d) (5.00/5.49) x 10 cm^3/gm

1.1-210

1 day is how many minutes?

(a) (60 / 24)
(b) (60 x 24)
(c) (24 / 60)
(d) (1/60)(1/24)

1.1-215

Breaking a chemical bond involves atomic motion of about an Ångstrom (10^{-10} m). Atoms in molecules move at about 1 km / s. It follows that the rupture of a bond is over in about how many seconds?

(a) 10^{-9}

(b) 10^{-11}

(c) 10^{-13}

(d) 10^{-15}

1.1-220

1 liter = 22.54 jiggers and
1 gram = 0.7716 scruples

What is the concentration in grams/liter of a jigger of solution containing a scruple of solute?

(a) 22.54 / 0.7716
(b) 22.54 x 0.7716
(c) 0.7716 / 22.54
(d) 1 / (22.54 x 0.7716)

1.1-230

An experiment calls for Y moles of acetic acid. You have a solution that has a concentration of C moles/liter. How many liters of the solution do you need for the experiment?

(a) C / Y
(b) C • Y
(c) Y / C
(d) Y + C

1.1-240

How many grams of napthalene (mol. wt. 128) are required to make up 100 ml of a 0.1 M solution?

(a) 128×10^{-2}

(b) $10^{-2} / 128$

(c) 128×10

(d) $10 / 128$

1.1-250

An ordinary tree is 28% carbon by mass, is about 40 years old, and weighs about 1800 pounds. How many pounds of carbon does an ordinary tree "fix" per year on average?

(a) 28 x 40 / 1800
(b) 28 x 1800 / 40
(c) 1800 x 40 / 0.28
(d) 0.28 x 1800 / 40

1.1-310

245.876 + 4.65 + 0.3678 =

(a) 250.8938
(b) 250.894
(c) 250.89
(d) 250.

1.1-320

129.578 x 32.33 =

(a) 4189.
(b) 4189.3
(c) 4189.26
(d) 4189.257

1.1-330

129.578 ÷ 32.33 =

(a) 4.00798
(b) 4.01
(c) 4.008
(d) 4.0