Name: _____

_ Date: _____ #: ____

AP CHEM NON-CALCULATOR MATH REVIEW

Directions: Solve for *x* or answer the question and *show your work*.

1)
$$\frac{40 \times 0.1}{50} = x$$

$$2) \quad 4 \times 10^{-4} = \frac{x^2}{0.01}$$

3)
$$\frac{(1-x) + x + x = 1.40}{\frac{x^2}{1-x}} = y$$

4)
$$0.05 \times \frac{-437}{0.5} = x$$

Which is larger,
$$x$$
 or y ? Justify your answer.

5)
$$39 \times \frac{1}{39} \times \frac{1}{1} = x$$
$$39 \ g \times \frac{1}{71} \times \frac{1}{0.5} = y$$

6)
$$2.00 + -1.22 = x$$

7)
$$-\log(0.01) = x$$

8) Estimate your answer to within 2 adjacent integers (i.e. 20–21)
$$-\log(1.3 \times 10^{-5}) = x$$

9)
$$\left| \frac{0.2^2}{0.8} = x \right|$$

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Solve for z.

11)
$$2.23 - 0.8 = x$$

$$x \times \frac{1}{143} \times \frac{1}{1} \times \frac{35}{1} = y$$

$$0.74 - y = z$$

Estimate *y* to within 2 adjacent integers.

12)
$$\frac{(500 \times 1) - (200 \times 2)}{700} = x$$
$$-\log(x) = y$$

13)
$$(2 \times 10^{-6}) \times (1 \times 10^{3})^{2} = x$$

Is x greater than or less than 6.5? Justify your answer.

$$\frac{2.5}{1.5 \times 1.0} = x$$

Estimate *y* to within 2 adjacent integers. 1 0.94

$$64 \times \frac{1}{16} \times \frac{0.94}{1} = x$$

17)
$$200 \times 4.2 \times (x - 50) = 8,400$$

Is x greater than or less than 230? Justify your answer.

$$\frac{0.2 \times 2}{(0.01)^2} = x$$

18)

What would be the whole number ratio of x to y?

19)
$$44 \times \frac{12}{44} \times \frac{1}{12} = x$$
$$45 \times \frac{2}{18} \times \frac{1}{1} = y$$

Is x greater than or less than 8×10^{-8} ? Justify your answer.

$$20) \qquad \left(0.064 \times \frac{1}{64}\right) (1 \times 10^{-7})^2 = x$$