

Name: ANSWERS:

S# : \_\_\_\_\_

Chem Assignment: Calculation and Sig. Figs:

\* Print the assignment

Submit these pages in class with your written work and solutions

- Assume that all given values are measured values unless otherwise specified. Solve for  $x$ .

- Where addition/subtraction is involved, show enough steps to justify your choice of sig. figs. For all other operations, list the number of sig. figs. in all of the input values in brackets above or below each value.

$$1. \quad x = \frac{7.28 \times 10^{-6}}{6.452 \times 10^{-4}} = 0.0113 \\ \text{or } 1.13 \times 10^{-2}$$

$$2. \quad x = \frac{(28.42)(0.08206)(303)}{9.0} \\ = 79 \quad \text{or } 7.9 \times 10^1$$

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### Chem Assignment: Calc & Sig. Figs - 2 -

$$3. \quad x = \frac{(28.42)(0.08206)(303)}{9.0 - (28.42)(0.292)}$$

$= 1 \times 10^3$       (Subtraction involved!)

$$4. \quad 87.2 \text{ cm} + 36.6 \text{ cm} + 0.07 \text{ cm}$$
$$= 123.9 \text{ cm} \quad (1.239 \times 10^2 \text{ cm})$$

$$5. \quad 2.83 \times 10^{-26} + 9.9672 \times 10^{-25} + 6.75 \times 10^{-25} + 8 \times 10^{-30}$$
$$= 1.700 \times 10^{-24}$$

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Chem Assignment: Calc & Sig. Figs - 3-

$$6. x = \log(6.87 \times 10^{-5})$$

$$= -4.163$$

$$7. \ln x = \frac{504 \times 10^3 \text{ J}}{8.314 \text{ J/K}} [(295)^{-1} - (373)^{-1}]$$

$$= 10^{18}$$

(the combination of subtraction and 'ln' rules!)