

Significant Figures and Scientific Notation

CHEMISTRY 110

Name _____
 last first . .

Hint: Work the problems assigned in the text first, many of these problems are similar to the homework problems. Remember :Answers to the problems in the text are in back of the text book

1. COMPLETE THE FOLLOWING TABLE:

<u>Decimal Form</u>	<u>Scientific Notation</u>	<u>Number of Significant Figures</u>
ex. 959.4	<u>9.594 x 10²</u>	<u>4</u>
10.895 g	_____	_____
1010.0 mL	_____	_____
0.0900 x 10 ⁻¹⁵ Kg	_____	_____
449.0 x 10 ⁻⁹ μg	_____	_____
_____	9.12 x 10 ⁻⁶ Km	_____
_____	1.703782 x 10 ⁻⁴ g	_____
_____	8.390 x 10 ⁻² cm	_____

2. Round off the following to 2 significant figures, then, express the answer in correct scientific notation

a. 0.0875 Answer _____

b. 19.50 Answer _____

c. 904.2 x 10⁹ Answer _____

d. 9003 Answer _____

3. Solve the following, the answer must be in scientific notation with the correct number of significant figures.

a.
$$\frac{9.678 \times 10^{-15}}{1.15 \times 10^2 \times 2.0 \times 10^{16}} =$$

Answer _____

b.
$$\frac{8.8 \times 10^{426}}{8.496 \times 10^{13} \times 35.4 \times 10^{-105}} =$$

Answer _____


4. Solve the following:

a.
$$\frac{1.36 \times 10^{15} \text{cm} + 9.445 \times 10^{17} \text{cm}}{(1.000 \times 10^9 \text{mins} - 1.000 \times 10^{10} \text{mins})} =$$

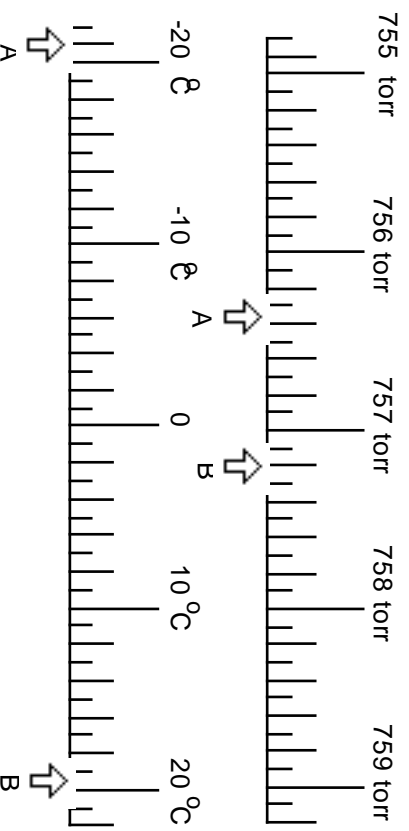
Answer _____

b.
$$\frac{(2.40 \times 10^{-4} \text{cm}) (7.5 \times 10^{-3} \text{cm})^4}{(3.00 \times 10^{-3} \text{cm} + 6.77 \times 10^{-4} \text{cm})^2} =$$

Answer _____

Turn to the next page 

8. Read the following scales to the correct number of significant figures.

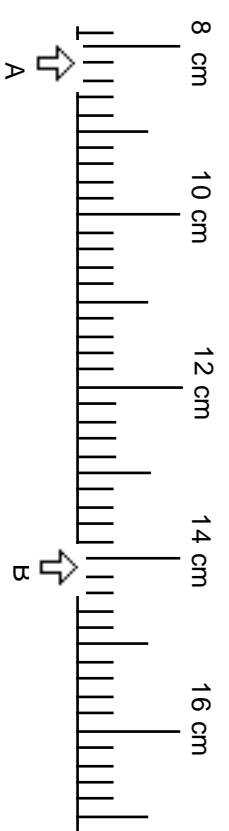


A. _____

B. _____

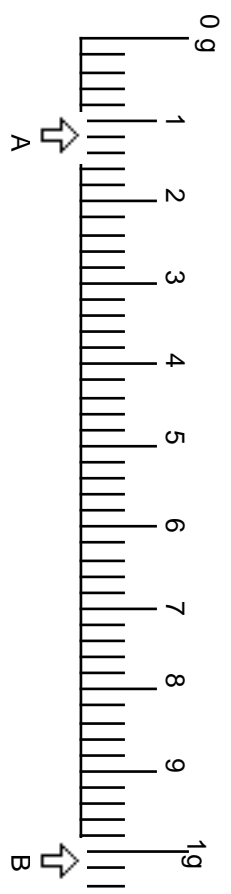
A. _____

B. _____



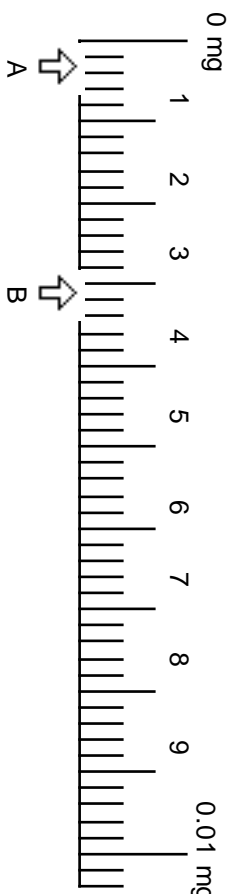
A. _____

B. _____



A. _____

B. _____



A. _____

B. _____