

NAME: \_\_\_\_\_

## Study Guide Significant Figures

How many significant figures are in the following numbers? Indicate exact numbers with an infinity symbol.

	# Sig Figs.		# Sig Figs.
a. 0.103 cm	3	i. 2, 300 g	2
b. 2.306 in	4	j. 8.10 L	3
c. 21	2	k. $2.40603 \times 10^5 \mu\text{m}$	6
d. 0.032 mL	2	l. 0.000200 kg	3
e. 1000 mL/L	unlimited	m. 144	3
f. 100. Lbs	3	n. 1001 tons	4
g. 85 boxes	2	o. 340. lbs	3
h. 0.0140 in	3	p. 24 hours/day	unlimited

Round off to the digit underlined. **Example:**  $10\underline{1}4 \rightarrow 1010$

	Answer		Answer
a.) $876.\underline{5}5$	876.6	f.) $43.\underline{7}6$	44
b.) $7\underline{6}.233$	76	g.) $1.2\underline{0}5 \times 10^{-3}$	$1.21 \times 10^{-3}$
c.) $679.\underline{9}54$	680.0	h.) $\underline{3}.45 \times 10^6$	$3 \times 10^6$
d.) $0.00\underline{3}56$	0.004	i.) $5.\underline{5}55 \times 10^2$	$5.6 \times 10^2$
e.) $2\underline{4}.5$	25	j.) $6.5\underline{6}56$	6.57

Convert the following to scientific notation

	Scientific Notation		Scientific Notation
850095	$8.50095 \times 10^5$	0.000085	$8.5 \times 10^{-5}$
175000	$1.75 \times 10^5$	0.00689	$6.89 \times 10^{-3}$
657800	$6.578 \times 10^5$	0.0009642	$9.642 \times 10^{-4}$

How many significant figures are present in the following numbers?

85.320000	9	0.0020600	5
1000.	4	140000	2
1000.1000	8	50000	1
0.0001200	4	50000.	5
45	2	5000.0000	8
325,980 cm	5	0.00000000001	1