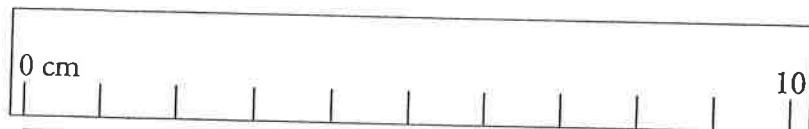


(WS 3.0 part I)

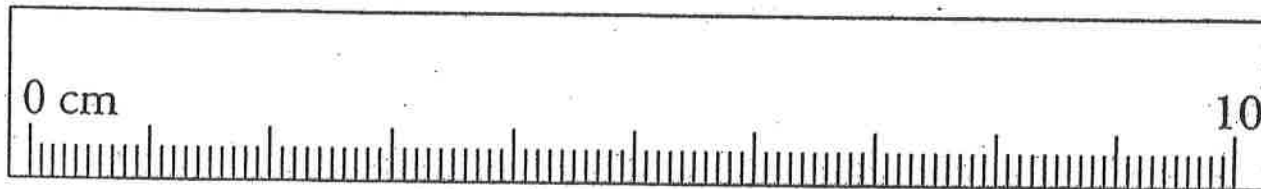
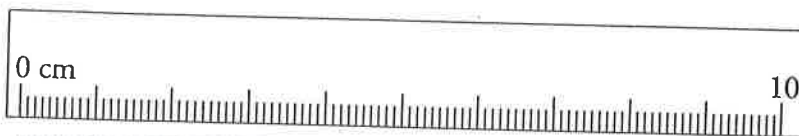
a.



b.



c.



Record the length of the wooden splint to the proper number of significant digits.

d.

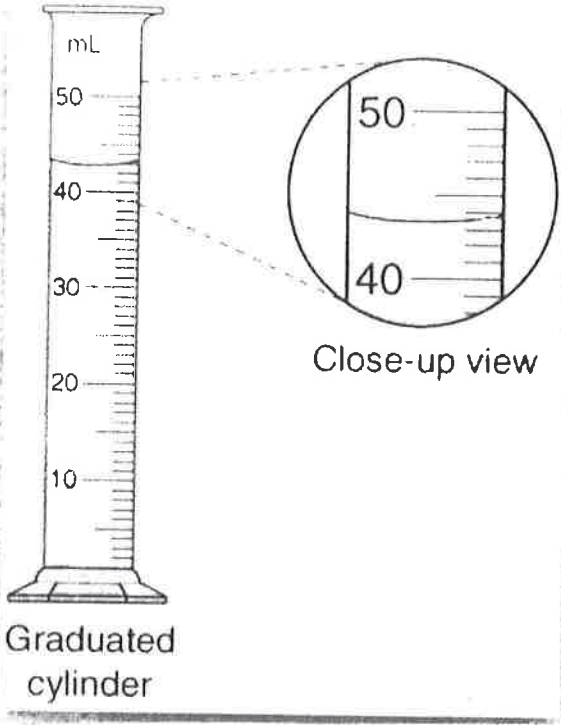


Record the length of the wooden splint to the proper number of significant digits.

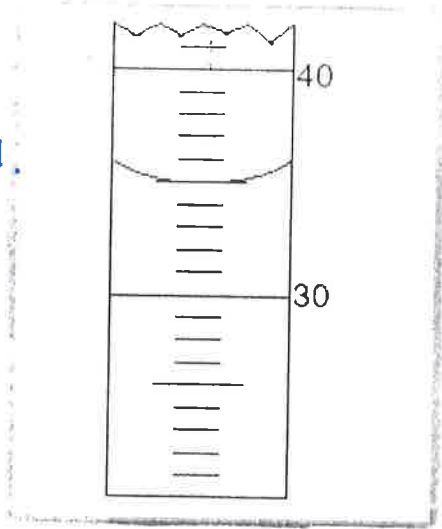
e.



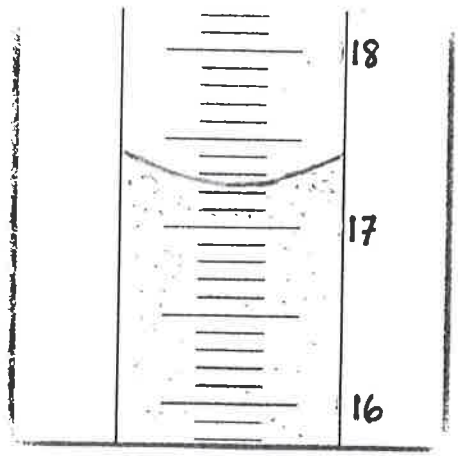
f.



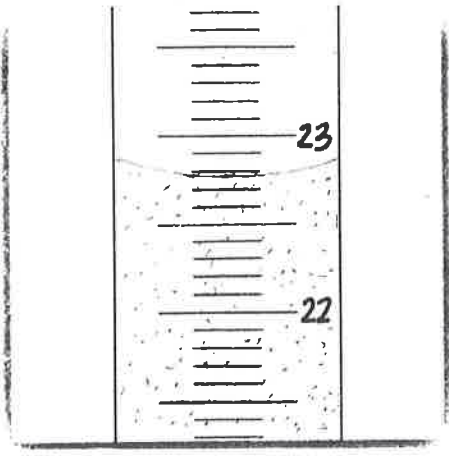
g.



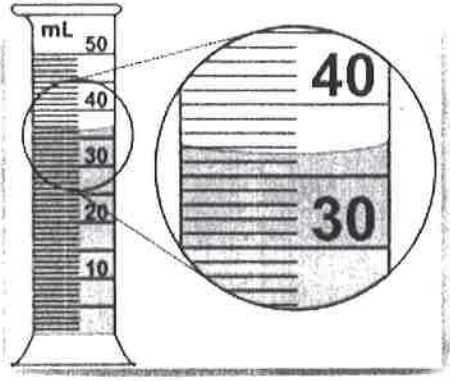
i.



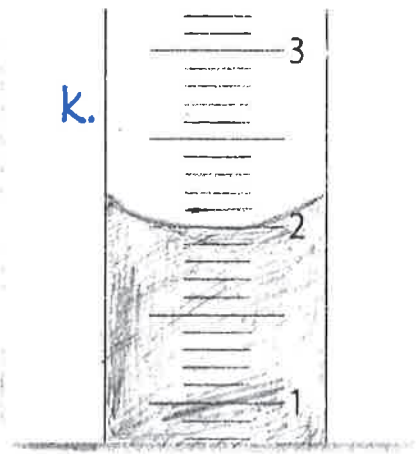
h.



j.



k.



✓ part II

00. Record the lengths and volumes on the previous page using the correct number of significant figures.

0. When you are taking quantitative data in lab, you should measure as precisely as possible/report as many significant figures as possible. Explain how you can tell how many significant figures you are allowed to report.

1. How many significant figures are in each of these numbers?

742 _____	0.074 _____	600. _____
742.1 _____	0.0740 _____	2.0020×10^1 _____
741.6 _____	7.4×10^3 _____	108000 _____
740 _____	7.400×10^3 _____	0.0457 _____
740. _____	6750 _____	3.000 _____
740.0 _____	6750. _____	600 _____
152.00 _____	0.076900 _____	

2. Fill in the blanks with “always”, “never”, or “sometimes.”

(If you answer “sometimes” then **explain** your answer.)

Zeros in between two non-zeros _____ count as significant figures.

For example, 405 has three sig figs and 6008 has four sig. figs.

Zeros on the left hand side of a number _____ count as significant figures.

For example 0.0045 has two sig. figs and .07777 has four sig. figs.

Zeros on the right hand side of a number _____ count as significant figures.

For example 85000 has two sig figs, 85000.0 has six sig. figs, and 0.850000 has six sig figs.

3. Rewrite each number in scientific notation so that it keeps the same number of significant figures as it started with.

2150 _____	300 _____	0.0070 _____
2150. _____	310 _____	0.000006780 _____
0.00025 _____	310.0 _____	0.1124 _____
0.0002500 _____	5.2 _____	0.007 _____
	600.0 _____	2146.0 _____

4. Round or rewrite the given number to 3 sig. figs., and to 2 sig. figs. Use scientific notation only when necessary.

Number	with 3 s.f.	with 2 s.f.
80	_____	_____
7060	_____	_____
3.482	_____	_____
10.46	_____	_____
101.46	_____	_____
20.267	_____	_____
4	_____	_____
600	_____	_____
6648.200	_____	_____
0.0002577	_____	_____
0.0030087	_____	_____
15.29	_____	_____
55014	_____	_____
719.8	_____	_____

5. Perform the following operations, and then report the answer to the correct number of significant figures.

Calculator Answer: Correct sig. fig. answer:

95.13 - 86.93	_____	_____
12.86 + 1.627	_____	_____
1.457 + 10.296	_____	_____
3.1222 - 2.40	_____	_____
15 + 1.28387	_____	_____
15 + 1.72134	16.72134	_____
23.17 - 23.06	0.11	_____
163.43 + 1.4	164.83	_____
126 - 3.9	122.1	_____
143 + 17	160	_____

6. Perform the following operations, and then report the answer to the correct number of significant figures.

Calculator Answer: Correct sig. fig. answer:

630.2 g / 703.9 mL	_____	_____
(7.86 g/mL) *(4.55 mL)	_____	_____
81.97g / 10.1 mL	_____	_____
10000. / 2500.	_____	_____
112.8 x 0.13	_____	_____
26 x 5.486	142.636	_____
33.3 / 99.9	0.333333333	_____
486 / 162	3	_____
6000. / 600.	10	_____
31.88 / 31.9	0.999373041	_____
31.69 / 31.7	0.999684543	_____