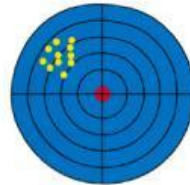
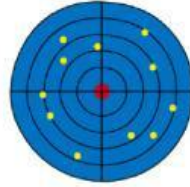


REVIEW

Chapter 3 : Lesson 3B

1. Select the best description for each of the following :



2. Three students each take 5 attempts to measure the length of a metal rod that has an exact length of 20 cm. Each student uses their own tape measure. Their results are shown in the Data Table below:

Measurements in cm			
# Attempt	Sally	Jack	Frank
1	22.1	19.8	20.1
2	22.0	20.1	20.0
3	22.0	20.3	20.0
4	22.1	19.7	20.1
5	22.0	20.2	20.0

Which student's measurements are very precise, but not very accurate ?

Which student had the most precise, and most accurate measurements ?

Which student's data represents Systematic Uncertainty ?

Which student's data represents Random Uncertainty ?

3. Select options from the drop-down boxes to complete the statements below correctly :

"Percent Error" is used to assess the _____ of experimental results by comparing them to known / accepted values. The formula for calculating "Percent Error" is as follows :

$$\% \text{ Error} = \left[\frac{\quad - \quad}{\quad} \right] \times 100$$

The closer to 0 the % Error is, the more _____ the scientist's measurements.

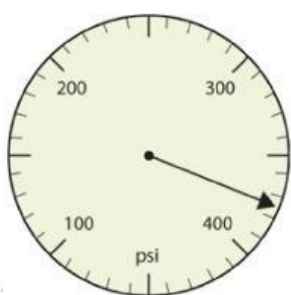
If % Error yields a _____ value, it means the scientist is measuring too high (above the true value).

If % Error yields a _____ value, it means the scientist is measuring too low (below the true value).

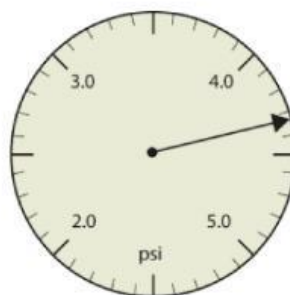
4. Calculate the % Error if the density of Acetone is measured during a Lab as 0.571 g/mL, but the true value is 0.498 g/mL.

- A) 0.14659
- B) 1.4659
- C) 14.659
- D) 146,59

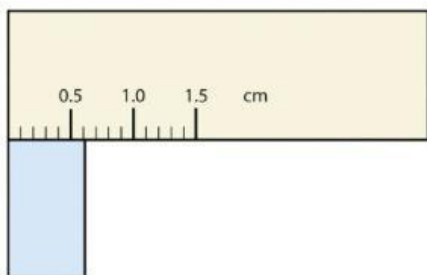
5. Provide the following measurements. Maintain integrity :



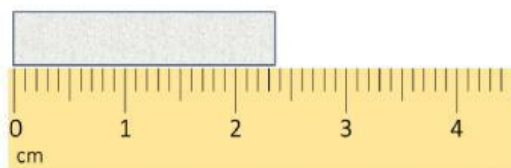
_____ psi



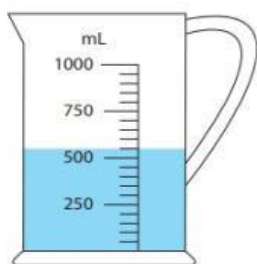
_____ psi



_____ cm



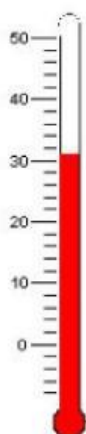
_____ cm



_____ mL



_____ mL



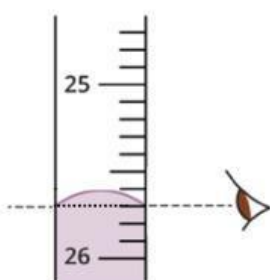
_____ °C



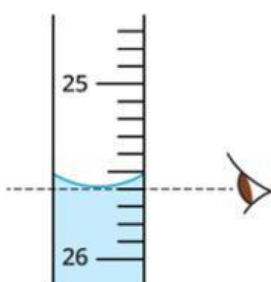
_____ °C

6. In which of the following scenarios is the scientist making a Parallax Error ? Select all that apply.

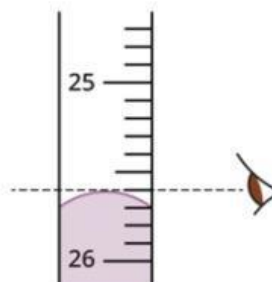
A.



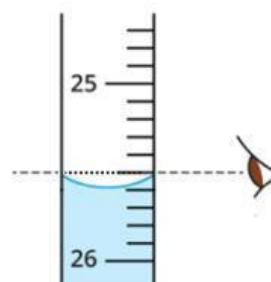
B.



C.



D.



7. Look at the 2 glass tubes below. Select options from the drop-down boxes to complete the statements below correctly :



Scenario (a) most probably contains _____ because it forms
a _____ meniscus.

Scenario (b) most probably contains _____ because it forms
a _____ meniscus.

In Scenario (a) the _____ forces (between the liquid particles)
are stronger than the _____ forces (between particles and
glass). In Scenario (b) the situation is swapped around.

8. How many SigFigs are there in the following numbers ?

8,535 _____

0.09 _____

1005.01 _____

90 _____

2.500×10^6 _____

90.0 _____

9. Write the following numbers in Standard Notation :

$$2.5 \times 10^3 = \underline{\hspace{2cm}}$$

$$2.5 \times 10^{-3} = \underline{\hspace{2cm}}$$

10. Write the following numbers in Scientific Notation :

$$0.000059 = \underline{\hspace{1cm}} \times 10$$

$$5,100,000 = \underline{\hspace{1cm}} \times 10$$