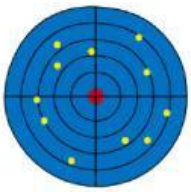
REVIEW

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 ?

LIVEWORKSHEETS

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 :

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

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).

LIVEWORKSHEETS

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.**

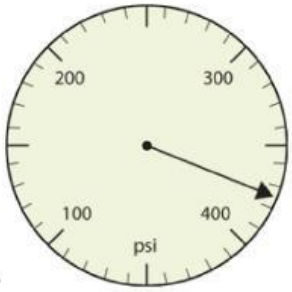
A) 0.14659

B) 1.4659

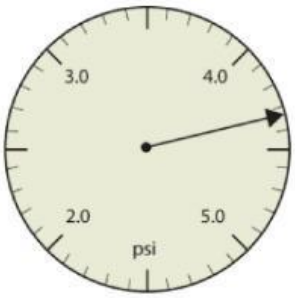
C) 14.659

D) 146,59

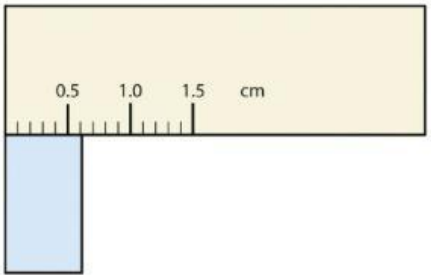
5. **Provide the following measurements. Maintain integrity :**



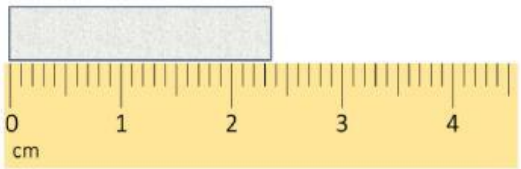
_____ psi



_____ psi



_____ cm



_____ cm

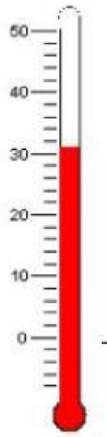
LIVEWORKSHEETS



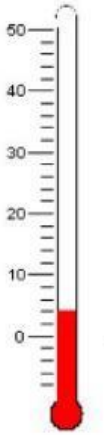
_____ mL



_____ mL



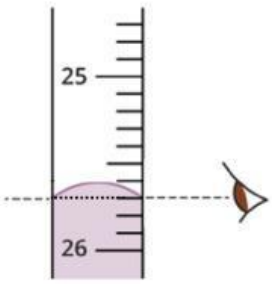
_____ °C



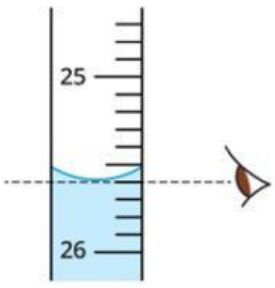
_____ °C

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

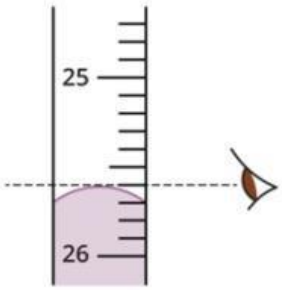
A.



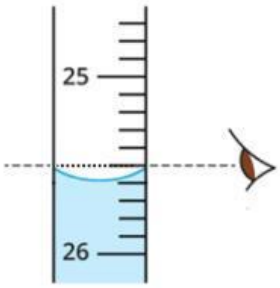
B.



C.



D.



LIVEWORKSHEETS

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

a) 

b) 

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 _____

LIVEWORKSHEETS

9. Write the following numbers in Standard Notation :

2.5×10^{3} = _____

2.5×10^{-3} = _____

10. Write the following numbers in Scientific Notation :

0.000059 = _____ X 10

5,100,000 = _____ X 10

LIVEWORKSHEETS